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ABSTRACT

Because audiovisual personnel certification patterns vary greatly among the states, these guidelines have been constructed as a general criteria which hopefully will assist states in formulating their own ways of raising audiovisual performance standards. The certification guidelines have been divided into two areas, based on competency. The Level I Audiovisual Specialist Certificate for minimally trained teachers and the Level II for teachers who have the qualifications to arrange budgets, determine staff requirements, and, in effect, run the entire audiovisual program. Included in the report are a nationwide survey of the status of certifications requirements, a description of the role of the media specialist, and a task list for specialists. (MC)

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# GUIDELINES FOR CERTIFICATION OF MEDIA SPECIALISTS

Extended Version

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EXTENDED VERSION

September 1972

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# GUIDELINES FOR CERTIFICATION OF AV SPECIALISTS

William R. Fulton
1969

## Introduction

Certificate patterns vary greatly among states and each state sets its own certification requirements. Obviously, the guidelines presented here must be translated to conform to the certification pattern of each state using them.

There are a variety of ways of up-grading the professional activities of audiovisual personnel, of which certification is only one. The guidelines are not intended to be sufficiently comprehensive or definitive to up-grade all audiovisual activities per se. Rather they are presented as general criteria which hopefully will assist states in formulating their own ways of raising performance standards.

To develop a unified list of guidelines for all specializations is obviously impractical due to the differences in competencies required in each specialization. Therefore, these guidelines are not intended to be all inclusive, but rather to deal more particularly with the competencies relating to the more traditional audiovisual activities. Obviously, there is a need for the development of specific guidelines for each of the various professional and paraprofessional specializations.

## Rationale

In formulating the guidelines, an attempt was made to reconcile them with the standards of existing accrediting groups and to use terms consistant with those used in the Standards for School Media Programs of AASL-DAVI. Those standards take cognizance of specializations by media. A specialist in nonprint media is referred to herein as an "audiovisual specialist." Specialists in the print medium are not discussed in these guidelines. Neither do these guidelines include the specifications for the media specialist which include preparation in both print and nonprint media; however, the media specialist would be expected to acquire at least the basic competencies as set forth in these guidelines.

Today's unprecedented interest in and support of educational innovations in schools have brought about new relationships among academic disciplines, behavioral science, communication technology, school personnel, and students. These new relationships among people, theories and things are producing improved learning; increased emphasis on individualized instruction; more efficient use of human resources; and major changes in the materials, facilities and techniques of instruction.

Such relationships reflect the realization that schools must be served by good teachers, that good teaching requires adequate media support and that this, in turn, requires well-prepared media personnel including audiovisual specialists. These same factors imply that the role of the audiovisual professional in education is changing from that of a keeper and dispenser of teaching aids to that of an analyst and designer of instructional systems who must be actively involved in the planning of learning environments and in providing for related support functions and evaluative procedures.

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Revised by William R. Fulton at the direction of the Executive Committee, based on a paper prepared at the direction of the Board of Directors of the Association for Educational Communications and Technology, by an Ad Hoc Committee: William R. Fulton, William F. Grady, Dale Hartzler, Robert Hunyard, Arthur Lalime, and Clark Shelby.

The optimum fulfillment of the new functions in education requires a variety of competencies, each of which could conceivably result in some degree of specialization. Some of these specializations are purely professional in nature while others are of a technical nature. Classic examples of some of the multi-faceted professional specializations can be found in such areas as computers, television, programing, libraries or print materials, motion picture production, and audiovisual education. There is also a need for specialists in such technical areas as graphics production, camera operation, mechanical maintenance and repair of equipment, and electrical maintenance and repair of communication media.

For the states practicing reciprocity of certification, it is recommended that the guidelines be used in making recommendations to accrediting agencies or other groups determining the basis for reciprocity. In any case there are qualities common to certain kinds of educational personnel. Consequently, there are strong reasons for using selected criteria to guide in determining the level of performance of the audiovisual specialist.

While there is a movement toward the so-called "approved program" approach to certification, guidelines are still needed to give direction to certification and accrediting agencies. At the same time, there is a movement away from mandating certain specific courses for certain numbers of credit hours; but again, there is a place for the suggestion of the kinds of competencies certain types of educational specialists ought to have.

Many states are moving toward endorsements which are attached to regular certificates. For example, frequently there is a certificate given to either an elementary or secondary teacher, followed by an endorsement for either a grade level or subject matter area. These same states may also give administrative and supervisory certificates to which an endorsement may be attached (e.g., elementary principal). Where this type of structure exists, it is recommended that the audiovisual certification be attached as a special endorsement to either the elementary or secondary teaching certificate or to the administrative or supervisory certificate depending upon the assigned functions of the individual applying.

In other states there is a special category of certificate sometimes entitled "Special School Personnel." Where this designation is the most appropriate for the audiovisual specialist, certification should be built upon the same general principles that apply to other kinds of specialized school personnel.

It is recognized that certification is a means of ensuring only a minimum level of competence on the part of the personnel who make instructional decisions in the schools and that many states recognize varying levels of competence by classifying certificates in various ways. Since certification normally requires only the minimum level of competence, it is hoped that personnel would go beyond these minimum requirements.

It is the task of each state to identify the nature of the specialization desired for certification and to adapt these guidelines to the state pattern. Each state should make provision for the existence of specializations peculiar to its needs and levels of performance.

Premises

The guidelines are based on the following premises:

1. It is no longer desirable to relate required audiovisual competency to building or district level programs or to the size of school or district. Rather, competency requirements should be related to the sophistication and complexity of the audiovisual program.

2. Certification should set minimal competency requirements for each level of certification within the audiovisual field.

3. Audiovisual certification should conform to the normal pattern of certification in each state either as an endorsement or any other normal existing state certification patterns.

4. Basic competencies are designed for minimal audiovisual programs. Such an audiovisual specialist should have minimal competency in the utilization of several media and functions.

5. Advanced programs require more competency. The degree of competency required is dependent on the sophistication and/or complexity of the audiovisual program or the depth of specialization required.

6. There are functions and areas, common to all levels of audiovisual performance, that vary in the degree of sophistication at which they are performed. Examples are: (a) organization and administration of media services, (b) production of materials (single or multi-media), (c) selection and evaluation of media (materials and equipment), (d) staff and student development, (e) instructional development strategies (including curricula integration and communication theory), and (f) design of instructional systems.

## A LEVEL I AUDIOVISUAL SPECIALIST CERTIFICATE

A Level I Certificate relates to minimum competencies to perform the necessary functions of a minimal audiovisual program.

General Requirements

The minimal requirements for a Level I Audiovisual Specialist Certificate should include:

1. A bachelor's degree

2. A teaching, supervisory or administrative certificate

3. Two years of classroom teaching experience

4. A total of 30 semester hours for the achievement of competencies needed to perform the varied functions listed below. It is recommended that the credits include:

a. 12-15 appropriate level semester hours in audiovisual education
b. 12-15 appropriate level hours in other professional education areas that help develop the required competencies such as curriculum, educational psychology, theory of learning, administration, etc.

Level I Competency Requirements

The minimally trained audiovisual specialist should be competent to perform the following activities at a minimal level:

1. Consult with teaching personnel regarding the use of a wide range of audiovisual materials in the solution of instructional problems.

2. Supervise the circulation and scheduling of audiovisual materials and equipment and the ordering of equipment and materials from sources outside the school.

3. Advise in the preparation of all teacher/pupil-made audiovisual teaching materials.

4. Advise and assist in the selection of appropriate audiovisual materials and equipment which will contribute to the achievement of the instructional objectives.

5. Arrange for and assist in in-service education for teachers in selection and use of audiovisual materials and techniques.

6. Supervise the training of students and teachers in operation and use of audiovisual services.

7. Maintain liaison and coordination with the district and/or regional level audiovisual services.

8. Advise and assist in the identification and acquisition of extraschool instructional resources.

9. Assist and encourage students in the use of audiovisual materials for their communication purposes.

10. Assist teachers, supervisors and administrators in evaluating the results of the use of audiovisual materials and technological resources for teaching.

LEVEL II AUDIOVISUAL SPECIALIST CERTIFICATE

A Level II Audiovisual Specialist Certificate is designed for a more sophisticated audiovisual program. It has no relationship to the Level I Certificate except that some of the requirements of the Level I Certificate are prerequisites to those of Level II.

Candidates for the Level II Certificate should have as a minimum:

1. A bachelor's degree

2. A teaching, supervisory or administrative certificate

3. Two years of classroom teaching experience. (Note: In certain assignments within a specialization this requirement may be modified to accept experience in practicums, internships or other appropriate experiences in lieu of the teaching experience.)

4. A total of 60 appropriate semester hours beyond the bachelor's degree. Included in this are 24-30 appropriate level semester hours in audiovisual education with the remainder directed to other professional education and cognitive areas (e.g., design of instructional systems, curriculum, development strategies, theory of learning, educational psychology, sociology, speech, personnel management, etc.).

A Level II certified Audiovisual Specialist should possess the competency to perform at a minimal level the following activities:

1. Coordinate selection and evaluation of audiovisual instructional materials and equipment.

2. Administer the organization, distribution and maintenance of audiovisual instructional materials and equipment.

3. Work with teachers, psychologists and content specialists in the design and production of teaching materials to supplement materials available from other sources.

4. Work with administrators, curriculum specialists, supervisors and teachers in the design and implementation of instructional systems, particularly the implementation of communication functions.

5. Conduct experimentation and evaluation of audiovisual programs and projects.

6. Develop audiovisual budgets and monitor their expenditure.

7. Determine staff requirements and participate in the selection, training and supervision of professional, clerical and technical personnel.

8. Plan for space and facilities required for audiovisual materials and equipment, television, and to make optimum use of information retrieval systems and other related services.

9. Assist in the planning of new buildings and the remodeling of old with regard to optimum physical conditions for utilization of audiovisual materials.

10. Keep school administrators and supervisory staff informed of the status of the audiovisual program and of new technological developments related to teaching and instructional communication.

11. Consult and maintain liaison with other supervisory staff, with state and national audiovisual personnel, and with professional associations and institutions regarding plans for improving and extending the uses of instructional technology.

12. Participate in planning and assist in coordinating the linking of communications functions

within the school system to external communications systems.

13. Gather and disseminate information relating to procedures for initiating, planning and evaluating audiovisual programs, research findings, and significant new developments in instructional communications and technology.

Concluding Comments

There are other matters related to the adoption of a certification program to be kept in mind, specifically state and regional accreditation. In states that have school accreditation, the group responsible for certification should work to see that accreditation standards incorporate the standards relating to audiovisual programs and personnel.

Persons or groups endeavoring to develop a certification pattern in their state must realize that there are a number of avenues which must be pursued to achieve and implement certification. Some of the groups, associations, boards, agencies, and commissions to be consulted are:

1. The state money support system developed by the state to provide financial aid to local school or school districts.

2. The state agency that certifies, recognizes or accredits the school(s) or school program(s).

3. The institution responsible for training audiovisual personnel.

4. The state teacher and instructional personnel certification board, commission or office.

5. The state's chief state school audiovisual officer.

6. The state commission, board or other agency responsible for establishing rules pertaining to schools and instructional personnel.

7. The state agency, usually within the Department of Public Education, responsible for the enforcement of these rules, regulations or laws.

7. The state education association.

9. State Commissions on Teacher Education and Professional Standards.

Since state educational program structures vary, it may be necessary to consult additional agencies.

It is important to recognize that the implementation of audiovisual certification is dependent to a large extent upon the degree of audiovisual commitment of all administrative personnel charged with the improvement of instruction and to the strict enforcement of legal regulations pertaining to certifications.

# CERTIFICATION OF AUDIOVISUAL PERSONNEL:

## The Second Nationwide Status Report

William F. Grady
1972

This document is the last in a series of three two-year studies (conducted in 1968, 1970 and 1972) concerning certification of audiovisual personnel in the United States. It contains a summary of the data contained in the 1968 and 1970 nationwide studies and introduces the findings from the 1972 nationwide survey.

### Historical Background

Standards for the certification of audiovisual personnel were established by the Association for Educational Communications and Technology (then DAVI, hereafter referred to as AECT) in a document entitled Guidelines for the Certification of AV Personnel published in November 1969. The Certification Committee of the PEMS Commission had concentrated its major effort since the 1968 AECT Convention in Houston, Texas, toward developing these guidelines. The document was presented to the Delegate Assembly at the 1969 AECT Convention in Portland, Oregon; further revised by William R. Fulton; and accepted by the Executive Committee, AECT Board of Directors, in November 1969.

The Certification Committee at the AECT Convention in Portland decided, in order to provide a historical touchstone regarding certification for audiovisual personnel, to conduct a nationwide survey of certification programs for audiovisual personnel in existence in the various states at the time the Guidelines for Certification of AV Personnel was published. The survey was conducted and then reported to the AECT Convention in Detroit in April 1970.

At the 1971 AECT Convention in Philadelphia, the Certification Committee decided to conduct another nationwide survey on the same topic -- certification programs for audiovisual personnel in the United States. This paper contains the findings of that study and the results were reported to the 1972 AECT Convention in Minneapolis, Minnesota as the second nationwide status report. (The 1968 study was in an unpublished doctoral dissertation.)

In each nationwide study, the investigation was designed to identify and provide information concerning AV Personnel Certification in those states:

1. That currently have a certification program in effect for AV personnel.

2. That do not currently have a certification program in effect for AV personnel.

3. In which no plans are being made for the certification program for AV personnel at this time.

4. In which plans are being made for certification programs for AV personnel that will become effective within the next one to three years.

A single-page questionnaire (Appendix A) was developed and mailed with a self-addressed, stamped envelope to each person listed on AECT's Roster of Chief State School Audiovisual Officers. One hundred percent of the questionnaires were marked and returned or the data was transmitted via telephone. Table I shows the current and projected status of AV personnel certification in the various states based on responses to the questionnaire.

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Conducted by the Certification Committee of the PEMS Commission, AECT, William F. Grady (Investigator). Reported to the AECT Convention, Minneapolis, Minnesota, April 1972. Members of the Certification Committee: William F. Grady, Clark Shelby, William Fulton, William N. Grimes, Dale C. Hartzler, Robert Hunyard, Arthur LaLime, Roland Mergener, Leslie Nelson, Lyton R. Reed, Philip Sleeman, Robert Wheeler, Herbert Lawrence, David Spillers, George Hodowanec, Robert George, Thomas Wilson.

The 1968 Study

A nationwide survey conducted by William F. Grady in 1968 snowed seven states with a certification program for audiovisual personnel. Those states were Indiana, Iowa, Minnesota, North Carolina, Pennsylvania, Utah, and Wisconsin.

In 1968, there were 10 states that indicated they were working on a certification program for audiovisual personnel and hoped to have it established in one to three years. Those 10 states were Arizona, Arkansas, Florida, Hawaii, Vermont, Idaho, Nebraska, Ohio, Oklahoma, and Washington.

The 1970 Study

By 1970, 14 states indicated they had certification programs for audiovisual personnel. Those states were Connecticut, Idaho, Indiana, Iowa, Minnesota, Montana, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Utah, and Wisconsin.

In 1970, there were 22 states that indicated they were working on a certification program for audiovisual personnel and hoped to have it established in one to three years. Those states were Arizona, Arkansas, Colorado, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Kansas, Louisiana, Maryland, Michigan, New Hampshire, New Mexico, Oregon, Rhode Island, South Dakota, Texas, Vermont, Washington, and West Virginia.

The 1972 Study

A tabular presentation of the data gathered by the 1972 study is presented in Table I entitled "Current and Projected Status of AV Personnel Certification in the Several States."

Currently, there are 22 states indicating they have certification programs for audiovisual personnel. These states are Arkansas (9-1-72 effective), Connecticut, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Massachusetts (available now and effective 9-28-74), Minnesota, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Texas (written but not yet adopted), Utah, Wisconsin, and Wyoming.

Nineteen states indicated they are working on certification and hoped to have a program in one to three years. These states are Alabama, Arizona, Colorado, District of Columbia, Georgia, Kentucky, Louisiana, Maine, Maryland, Mississippi, New Hampshire, New Mexico, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, Washington, and West Virginia.

In Table II, the characteristics of the certification program in each of the 22 states are shown.

There are 10 states that do not have certification programs and are not working toward adoption of such at this time. These states are Alaska, California, Delaware, Kansas, Michigan, Missouri, Montana, Nebraska, Nevada, and New Jersey.

Summary and Conclusion

Based on the data gathered by this survey, it seems that a "typical" AV personnel certification program includes a bachelor's degree, a valid teaching certificate, and two or three years of teaching experience. If an average is used as typical, then 15-24 hours of graduate credit in audiovisual courses and 12-21 hours of graduate credit in electives and related courses would be required for an AV personnel certificate.

It should be understood that many state certification programs use endorsements or riders which are attached to the basic teaching certificate. In such cases a new certificate is not issued for the AV speciality, instead an endorsement or rider is simply attached to the basic teaching credential.

In order to help foster better understanding of and to disseminate more complete information concerning the various AV personnel certification programs in existence in the various states at this time, Appendix B outlines the certification program for each of the 22 states that currently have AV personnel certification.

Please bear in mind that changes and revisions are being made constantly; therefore, the certification programs as outlined in Appendix B for each state are in no way official or binding.

Based on the letters received with the return of the questionnaire, the telephone calls, and the data presented in Table I and Table II, several conclusions can be made.

1. Certification (of audiovisual specialists, learning resource specialists, and educational media specialists) continues to be an issue of considerable concern to a majority of the states. Forty states either have certification programs or will have, according to current plans, in one to three years.

2. The "unified" or combined "print/nonprint" certificate is becoming more evident. Of nine new certification programs made available since 1970, five (Oregon, Florida, South Dakota, Texas, and Illinois) require or recommend that courses be taken in both the print and nonprint areas and one of the existing certification programs in Minnesota was enlarged to include both areas. Prior to 1970 only two certification programs (North Dakota and Indiana) listed any courses required or recommended in both print and nonprint areas.

3. The "typical" AV certificate includes a bachelor's degree, a valid teacher's certificate, two to three years of teaching experience, 15-24 graduate credits in AV, and 12-21 graduate credits in related areas.

TABLE I

CURRENT AND PROJECTED STATUS OF AV PERSONNEL CERTIFICATION IN THE SEVERAL STATES

| States | Certification Program Effective Now | No Certification Program Effective Now | Plans are Being Made to Require Certification in One-Three Years | No Plans are Being Made to Require Certification |
|---|---|---|---|---|
| Alaska | | X | | X |
| Alabama | | X | X | |
| Arizona | | X | X | |
| Arkansas | X (effective 9-1-72) | | | |
| California | | X | | X |
| Colorado | | X | X | |
| Connecticut | X | | | |
| Delaware | | X | | X |
| District of Columbia | | X | X | |
| Florida | X | | | |
| Georgia | | X | X | |
| Hawaii | X | | | |
| Idaho | X | | | |
| Illinois | X | | | |
| Indiana | X | | | |
| Iowa | X | | | |
| Kansas | | X | | X |
| Kentucky | | X | X | |
| Louisiana | | X | X | |

TABLE I (continued)

| States | Certification Program Effective Now | No Certification Program Effective Now | Plans are Being Made to Require Certification in One-Three Years | No Plans are Being Made to Require Certification |
|---|---|---|---|---|
| Maine | | X | X | |
| Maryland | | X | X | |
| Massachusetts | X (available now; effective 9-28-74) | | | |
| Michigan | | X | | X |
| Minnesota | X | | | |
| Mississippi | | X | X | |
| Missouri | | X | | X |
| Montana | | X | | X |
| Nebraska | | X | | X |
| Nevada | | X | | X |
| New Hampshire | | X | X | |
| New Jersey | | X | | X |
| New Mexico | | X | X | |
| New York | X | | | |
| North Carolina | X | | | |
| North Dakota | X | | | |
| Ohio | X | | | |
| Oklahoma | X | | | |
| Oregon | X | | | |
| Pennsylvania | X | | | |

TABLE I (continued)

| States | Certification Program Effective Now | No Certification Program Effective Now | Plans are Being Made to Require Certification in One-Three Years | No Plans are Being Made to Require Certification |
|---|---|---|---|---|
| Rhode Island | | X | X | |
| South Carolina | | X | X | |
| South Dakota | X | | | |
| Tennessee | | X | X | |
| Texas | X (written but not yet adopted) | | | |
| Utah | X | | | |
| Vermont | | X | X | |
| Virginia | | X | X | |
| Washington | | X | X | |
| West Virginia | | X | X | |
| Wisconsin | X | | | |
| Wyoming | X | | | |

TABLE II

CHARACTERISTICS OF EXISTING STATE CERTIFICATION PROGRAMS FOR AV PERSONNEL

| State | Name of Certificate | Degree | Teacher's Certificate | Experience (years) | Number of Hours in AV | Number of Hours in Related Areas |
|---|---|---|---|---|---|---|
| Arkansas | Media Specialist (K-12) | Bachelor's | X | Directed teaching or 3 years classroom | 12 | 18 |
| Connecticut | Intermediate Administrator or Supervisor-Provisional | Master's | X | 5 years teaching experience (at least 3 of which must be in public schools in the U.S.) | 15 above Master's | |
| Florida | EDUCATIONAL MEDIA SPECIALIST | | | | | |
| | Rank 3 | Bachelor's | X | | 24 combined in print and nonprint | |
| | Rank 2 | Master's | X | | 30 combined in print and nonprint | |
| | Rank 1 | Doctoral | X | | 36 combined in print and nonprint | |
| Hawaii | MEDIA SPECIALIST CERTIFICATE | | | | | |
| | Basic | Bachelor's | X | Student teaching or one year | 21 | |
| | Professional | Master's or Bachelor's + 30 hours | X | Student teaching or one year | 21 | |
| Idaho | Education Media Generalist | Bachelor's | X | Internship or student teaching, or 3 years of classroom teaching | 24 | 6 hours in certain related areas may be used in lieu of 6 hours of AV courses |

TABLE II (continued)

| State | Name of Certificate | Degree | Teacher's Certificate | Experience (years) | Number of Hours in AV | Number of Hours in Related Areas |
|---|---|---|---|---|---|---|
| Illinois | Instructional Media Specialist | Bachelor's | X | | 24 combined in print and nonprint | |
| | Audiovisual Coordinator | Bachelor's | X | | 9 | |
| | Media Specialist | Bachelor's | X | | 32 combined in print and nonprint | |
| | Audiovisual Specialist | Bachelor's | X | | 32 | |
| Indiana | Supervisor of School Libraries & Instructional Materials Service -Provisional- | Master's | X | 3 years as a school librarian | | 10 -- Library Science<br>9-12 -- related areas |
| | Audiovisual Supervisor | Master's | X | 3 years | 10 beyond requirements for professional endorsement (professional endorsement 60 hours beyond B.A.) | 10 |
| Iowa | Educational Media Specialist | Master's | X | yes | | |
| Massachusetts (available now--effective 9-28-74) | Audiovisual Media Specialist | Bachelor's | X | | 30 in AV and related areas | |

TABLE II (continued)

| State | Name of Certificate | Degree | Teacher's Certificate | Experience (years) | Number of Hours in AV | Number of Hours in Related Areas |
|---|---|---|---|---|---|---|
| Minnesota | Audiovisual Director | four-year degree | X | 2 years teaching experience | 10 | Have earned credits in:<br>1. Educational administration<br>2. Elementary school curriculum<br>3. High school curriculum<br>4. Supervision and improvement of instruction |
| | Audiovisual Coordinator | four-year degree | X | | One course in AV methods<br>One course in AV administration | At least one course in any two areas above. |
| New York | Audiovisual/ Educational Communications | Master's<br>OR<br>30 hours of graduate study | X | 3 years supervisor<br>OR<br>5 years administrator | | |
| North Carolina | Audiovisual Director | Master's | X | 3 years teaching | 9 | 9 -- specific requirements<br>12 -- as electives |
| | | 6th year level | X | 3 years teaching experience within past 5 years | 9 (plus 30 graduate hours beyond Master's) | 9 -- specific requirements<br>12 -- as electives |
| North Dakota | Library (only) | Bachelor's | X | Recommend classroom teaching | | 16 -- Library Science |
| | Library-AV Combination | Bachelor's | X | One or more years classroom teaching | 10 | 16 -- Library Science |
| | Audiovisual (only) | Bachelor's | X | One or more years classroom teaching | 12 | |

(continued)

TABLE II (continued)

| State | Name of Certificate | Degree | Teacher's Certificate | Experience (years) | Number of Hours in AV | Number of Hours in Related Areas |
|---|---|---|---|---|---|---|
| North Dakota (continued) | Media Director | Master's | X | One or more years classroom teaching | 10 | 12 (+16 Library Science) (applicant must meet requirement for Library-AV combination above) |
| Ohio | Supervisor of AV | 5th year OR Master's | X | 2 years | 15-20 | Must meet requirements for supervisor's certificate |
| Oklahoma | Audiovisual Specialist<br>Standard Certificate | B.A. and formal admission to graduate study in approved program for certificate | X | 2 years | 15 (12 of these must be above B.A.) | 15 above B.A. |
| | Provisional Certificate | B.A. and formal admission to graduate study in approved program for certificate | X | 2 years | 10 (7 of these must be above B.A.) | 8 |
| | Temporary Certificate | B.A. | X | 2 years | 8:<br>-- 5 of which must be above B.A.<br>-- 1 course must be in AV utilization or AV production<br>-- the balance may be electives from related areas | |

TABLE II (continued)

| State | Name of Certificate | Degree | Teacher's Certificate | Experience (years) | Number of Hours in AV | Number of Hours in Related Areas |
|---|---|---|---|---|---|---|
| Oregon | EDUCATIONAL MEDIA | | | | | |
| | Basic Norm | Bachelor's | X | | 21 combined in print and nonprint | |
| | Standard Norm | Bachelor's | X | | 36 combined in print and nonprint | |
| Pennsylvania | Educational Media Specialist | Bachelor's | X | 3 years | 21 | |
| South Dakota | MEDIA PERSONNEL | | | | | |
| | Level II Accreditation | Bachelor's | X | | 10 combined in print and nonprint | |
| | Level I Accreditation | Bachelor's | X | | 15 combined in print and nonprint | |
| | Level I Exemplary | Bachelor's | X | | Librarians -- 18 in Library Science<br>AV Specialist -- 12 in AV | |
| Texas (written and proposed but not yet adopted) | LEARNING RESOURCES SPECIALIST | | | | | |
| | L.R.S. I | Bachelor's | X | | 18 combined in print and nonprint | |
| | L.R.S. II | Master's | X | 3 | 12 combined in print and nonprint<br>6 in "outside" electives | |
| | L.R.S. Administrator OR Supervisory | Master's | X | 3 years at level I or II | 6 in "outside" electives<br>6 combined in print and nonprint<br>Supervisory or Admininstrator Certificate | |

TABLE II (continued)

| State | Name of Certificate | Degree | Teacher's Certificate | Experience (years) | Number of Hours in AV | Number of Hours in Related Areas |
|---|---|---|---|---|---|---|
| Utah | Professional Certificate - Instructional Media Endorsement | Master's OR 55 quarter hours of graduate credit beyond B.S. | X | 3 years in education - 1 year must be in classroom | 30 quarter hours | 25 quarter hours |
| | Basic Professional Certificate - Instructional Media Endorsement | Bachelor's | X | | 12 quarter hours | |
| Wisconsin | Audiovisual Director - Media Specialist | Bachelor's | X | 3 years teaching | 12 | 2 |
| | Audiovisual Coordinator - Media Specialist | Bachelor's | X | | 4 | |
| Wyoming | AUDIOVISUAL | | | | | |
| | Initial | Bachelor's | X | 0 | 12 | |
| | Standard | Bachelor's | X | 3-5 | 18 | 5 |
| | Professional | Bachelor's | X | 5-8 | 15-30 | 5 |

APPENDIX A

(Letter printed on Temple University letterhead)

Dear

The Certification Committee of the PEMS Commission, AECT, is conducting a nationwide survey concerning certification requirements for public school audiovisual personnel. If your state has adopted a certification program for audiovisual personnel, please send me one copy of the requirements. If no program is in effect at this time, please mark the appropriate blank below and return this letter in the enclosed self-addressed, stamped envelope.

____ 1. No certification program is currently in effect.

____ 2. No plans are being made for the certification of audiovisual personnel in our state at this time.

____ 3. Plans are being made for a certification program that will become effective within the next one to three years.

With your cooperation a comprehensive nationwide status report will be made available at the Convention in Minneapolis in April.

Thank you for your time, effort and thoughtfulness in this matter.

Sincerely,

Dr. William F. Grady
Chairman, Certification Committee
PEMS Commission, AECT

APPENDIX B

# Arkansas

The following excerpt is taken from a publication entitled Laws and Regulations Governing the Certification of Teachers, Administrators, and Supervisors, Bulletin VI, effective September 1, 1972.

Specialists Certificates K-12 (valid for six years and based on a minimum of a bachelor's degree).

Professional requirements: Education -- 18 semester hours must include (a) study of the school, of the learning processes, and of teaching, and (b) directed teaching -- six semester hours.

Media Specialist (K-12) -- 12 semester hours
Selection, utilization and evaluation of instructional materials and equipment -- 3 semester hours
Administration of media materials -- 3 semester hours
Production of media materials -- 3 semester hours
Electives in audiovisual -- 3 semester hours

# Connecticut

In Connecticut, AV personnel are certified under the certificate for Intermediate Administrator or Supervisor -- Provisional.

The following excerpt is from the document Amendment of Certification Regulations (Administrative and Supervisory) published by the Connecticut State Department of Education, Bureau of Federal-State-Local Relations, Hartford.

Intermediate Administrator or
Supervisor -- Provisional

Sec. 10-146-60. This certificate, or the certificate as superintendent of schools, shall be required for all administrative and supervisory positions in Connecticut public schools (except state vocational-technical schools, technical institutes, state colleges, and public community colleges) including principal, supervisor of instruction, curriculum coordinator, assistant superintendent of schools, administrative or other special assistant to the superintendent of schools, supervisor or consultant in special subjects or fields, supervisor of academic subjects, system director of guidance or other special services, full-time director of adult education, or similar positions. It shall be required for the assistant to a person serving in any such position, if more than 20 percent of the assigned duties of such assistant involves administrative or supervisory responsibilities.

Sec. 10-146-61. To receive a provisional certificate as an intermediate administrator or supervisor, an applicant shall establish, by procedures described in section 10-146-2 of the regulations of Connecticut State agencies, that he/she meets the following requirements:

a. Holds a permanent or a standard Connecticut teaching certificate; or holds or is eligible for a provisional Connecticut teaching certificate, and meets all course requirements for a standard Connecticut teaching certificate; and holds a master's degree from an approved institution. For purposes of this section, "teaching certificate" means a certificate for professional service in the public schools.

b. Has completed five years of successful teaching experience, at least three of which shall have been in public schools in the United States, in a position or positions requiring certification in the state in which he/she was employed, or in a position or positions which would have required certification had the service been in Connecticut public schools. Consideration may be given toward fulfillment of the requirements of this subsection to applicants who have completed, as part of a planned program of preparation, a substantial period of internship in areas appropriate to the professional career objectives of the applicant, under the supervision of the recommending institution.

c. (1) Presents the recommendation of an accredited college or university approved in Connecticut for the preparation of administrative and supervisory personnel. The recommendation shall

state that the applicant is personally and professionally qualified to serve as a public school administrator or supervisor, and that he has completed an appropriate program at the institution specifically for school administration and supervision. The recommendation shall include a statement of the particular administrative or supervisory position which has been emphasized in the preparation. The program on which the institutional recommendation is based shall aggregate not less than 15 semester hours of graduate study in addition to the master's degree, taken at the recommending institution.

(2) The recommendation of an institution at which the applicant has completed no study appropriate to a program of preparation for school administration or supervision within eight years immediately preceding the date of the application shall not be considered valid.

(3) Special consideration for waiver of the recommendation may be given to individual applicants who present satisfactory evidence of not less than three years of successful experience in public school administration or supervision in another state, provided at least two years of such service shall have been completed within five years immediately preceding the date of the application.

d. Has completed, in his/her total post-baccalaureate program, study in each of the following areas:

(1) Foundations of education (historical, philosophical, sociological, etc.).
(2) Psychological foundations of learning.
(3) Curriculum development with emphasis appropriate to the professional career objective of the applicant.
(4) Educational administration and supervision, with emphasis appropriate to the career objective of the applicant.

Mere completion of courses appearing to meet the requirements shall not be accepted as prima facie evidence that the applicant meets requirements. Compliance with subsection (c) of this section is an absolute prerequisite to acceptance of the total program of preparation.

# Florida

The following excerpt is taken from a document entitled Educational Media Specialist (grades 1-12) which is a change in Plan B of the present specialization requirements. (This program has not been made effective as of this writing date.)

Specialization requirements for certification as an educational media specialist:

(1) Rank III Certificate

(a) A bachelor's degree with a major in
1. Educational Communications including:
-- audiovisual education
-- media design and production
-- radio and television
-- or combinations of these majors

2. Library Science

OR

(b) A bachelor's degree with 24 semester hours in educational media including the areas specified below

1. Nine semester hours in selection of and utilization of media including analysis, evaluation, selection, and design of printed and audiovisual media; procedures for the utilization of media by students and teachers; criteria for the selection of media, knowledge of media and their sources.

2. Three semester hours in functional operation of the school media center including principles, goals and programs of the school media center; the role and relationship of the school media center to the total school program; techniques of school media center operation; staff relationships both in the media center and the school; and the professional role of the media specialist.

3. Three semester hours in bibliographic control including skills and understandings of basic bibliographic principles and practices; aims of cataloging, classification, storage, and retrieval of information; practice in analyzing, classifying, and cataloging all types of media; techniques of interpreting the use of the media catalog.

4. Three semester hours in design and production of various types of educational media including graphics, cinematography, photography, and television and radio programs.

(2) Rank II Certificate

(a) A master's degree with a graduate major in

1. Educational Communication including:
-- audiovisual education
-- media design and production
-- radio and television
-- or combinations of these majors

2. Library Science

OR

(b) A master's degree with 30 semester hours in educational media including the areas specified above for the Rank III certificate covering educational media.

(3) Rank I Certificate

(a) A doctor's degree with a doctoral major

in
1. Educational Communication including:
   -- audiovisual education
   -- media design and production
   -- radio and television
   -- or combinations of these majors

2. Library Science

OR

(b) A doctor's degree, with 36 semester hours in educational media including the areas specified above for the Rank III Certificate covering educational media. At least six of the 36 semester hours must be earned at the graduate level.

# Hawaii

The following excerpt is taken from a document entitled Media Specialist Certificate dated January 25, 1971.

I. Basic Specialist Certificate

The Basic Media Specialist Certificate may be issued when the applicant meets one of the follow-int requirements:

A. Bachelor's degree from an accredited institution with a designated major in educational communications which includes course work in curriculum and instructional methods.

OR

B. All of the following:

1. Bachelor's degree

(a) Eighteen semester hours of professional education credits.
(b) Thirty semester hours of educational communication and library science credits (21 semester hours in educational communication and nine semester hours in library science).

2. Student teaching or one year of satisfactory teaching experience or one year of satisfactory experience in a school or other media center with responsibilities comparable to that of a school media center.

II. Professional Specialist Certificate

The Professional Media Specialist Certificate may be issued when the applicant meets one of the following requirements.

A. Master's degree from an accredited institution with a designated major in educational communication which includes course work in curriculum and instructional methods.

OR

B. All of the following:

1. Bachelor's degree plus 30 semester hours.

(a) Twenty-four semester hours of professional education credits, of which six semester hours must be graduate credits.
(b) Thirty semester hours of educational communication and library science credits (21 semester hours in educational communication and nine semester hours in library science).

2. Student teaching or one year of satisfactory teaching experience or one year of satisfactory experience in a school or other media center with responsibilities comparable to that of a school media center.

# Idaho

The following excerpt is from the document Idaho Certification, Professional Personnel, 1969, Department of Education, Boise.

General Endorsements for
Teaching Certificates

Either a Standard or Advanced Elementary Certificate or a Standard or Advanced Secondary Certificate may receive the education media generalist endorsement, the school librarian endorsement, or the driver education endorsement by fulfilling the requirements below.

EDUCATION MEDIA GENERALIST

Not less than 24 semester credit hours in the general field of educational media, at least 12 hours of which must be in the areas of selection, organization and administration of educational materials. Up to six semester credit hours in the subject areas listed below, beyond any such hours which may be required for qualification for the Standard Certificate, may be substituted for an equal number of hours in the field of educational media for the purpose of meeting the requirements for this endorsement.

- Philosophy of Education
- Educational Administration
- Curriculum Design or Development
- Pedagogy or Methods of Instruction
- Educational Psychology or Theory of Learning
- Child or Adolescent Psychology
- Communications
- Graphic Arts

STANDARD ELEMENTARY

A Standard Elementary Certificate may be issued by the State Board of Education to any person of good moral character who has a bachelor's degree from an accredited college or university and meets the following specific requirements:

1. A minimum of 24 semester (36 quarter) credit hours in the philosophical, psychological and methodological foundations and in the professionalized subject matter of elementary education which must include not less than six semester

(nine quarter) credit hours of elementary student teaching. (Must have some credit in all areas.) Three years' satisfactory and successful experience as a teacher in the elementary school may be substituted for the student teaching requirement. (College credit is not allowed for experience, and driver education is not applicable to professional education credit.)

2. A minimum of 42 semester (63 quarter) credit hours in general education selected from the following areas: the humanities, the social sciences, the fine arts, mathematics, the physical sciences and/or the biological sciences, and language skills.

These 42 semester (63 quarter) credit hours will include:

- Twelve semester (18 quarter) credit hours of English, including composition and literature
- Twelve semester (18 quarter) credit hours of social science, including American history and/or government. (Psychology will not satisfy this requirement.)
- Eight semester (12 quarter) credit hours in two or more areas of natural science. (Psychology will not satisfy this requirement.)
- Three semester (four quarter) credit hours of fine arts (music or art)
- Six semester (nine quarter) credit hours in fundamental arithmetic

3. This certificate is valid for a period of five years and is renewable. (See Administrative Regulation relating to recency of credit.)

ADVANCED ELEMENTARY

An Advanced Elementary Certificate may be issued by the State Board of Education to any person of good moral character who meets the requirements for the Standard Elementary Certificate and, in addition, has a master's degree from an accredited institution with a major in the field of elementary education or has completed an approved fifth-year program of study from an accredited institution with a major in the field of elementary education.

This certificate is valid for a period of five years and is renewable.

STANDARD SECONDARY

A Standard Secondary Certificate may be issued by the State Board of Education to any person of good moral character who has a bachelor's degree from an accredited college or university and meets the following specific requirements:

1. A minimum of 20 semester (30 quarter) credit hours in the philosophical, pscyhological and methodological foundation of education which must include not less than six semester (nine quarter) credit hours of secondary student teaching. (Must have some credit in all areas.) Three years' satisfactory and successful experience as a teacher in the secondary school may be substituted for the student teaching requirement. (College credit is not allowed for experience, and driver education is not applicable to professional education credit.)

2. Preparation in at least two fields of secondary teaching -- a major subject of at least 30 semester (45 quarter) credit hours and a minor subject of at least 20 semester (30 quarter) credit hours. Preparation of not less that 45 semester (67 quarter) credit hours in a single area may be used in lieu of a major and minor field.

This certificate is valid for a period of five years and is renewable. (See Administrative Regulation relating to recency of credit.)

ADVANCED SECONDARY

An Advanced Secondary Certificate may be issued by the State Board of Education to any person of good moral character who meets the requirements for for the Standard Secondary Certificate and, in addition, has:

1. A master's degree or completed approved fifth-year program of study from an accredited institution, the program for which must include at least:

- Eight semester (12 quarter) credit hours in professional education
- Eight semester (12 quarter) credit hours in a teaching field or area of educational service

This certificate is valid for a period of five years and is renewable.

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# Illinois

The following data is taken from Section 13-3, Standards for Media Services and Guidance Personnel, Nurses and Teachers.

13-3.1 Preparation of Persons Providing Media (Instructional Materials) Service
(See Section 12-4 with reference to the nonretroactive policy applied to the qualifications of professional personnel.)

13-3.1A
Position: The instructional media specialist: responsible for both library and audiovisual services
Recognition Requirements: Certificate: Teacher Work in Special Field: 24 semester hours with at least nine in audiovisual and 15 in library science, including training in administration, organization, selection, production, and communications

13-3.1B
Position: School librarian responsible for library services
Recognition Requirements: Certificate: Teacher Work in Special Field: 18 semester hours in library science including organization and administration, cataloging and classification, reference, and materials (elementary or secondary level)

13-3.1C
Position: Audiovisual coordinator: responsible for audiovisual services
Recognition Requirements: Certificate: Teacher
Work in Special Field: nine semester hours in audiovisual education

13-3.1D
Position: Media (instructional materials) Specialist: Works with students, teachers and media (instructional materials, school library, and audiovisual) personnel
Recognition Requirements: Certificate: Teacher or Standard Special with Media (instructional materials) Teaching endorsement
Work in Special Field: 32 semester hours in media (instructional materials, library science, audiovisual) including training in administration, organization, selection, production, and communications

13-3.1E
Position: School library specialist: Works with students, teachers and school library services
Recognition Requirements: Certificate: Teacher or Standard Special with School Librarian Teaching Endorsement
Work in Special Field: 32 semester hours in library science

13-3.1F
Position: Audiovisual specialist: Works with students, teachers and audiovisual services
Recognition Requirements: Certificate: Teacher or Standard Special with Audiovisual Specialist Teaching Endorsement
Work in Special Field: 32 semester hours in audiovisual education

# Indiana

The following excerpt is from the document Certification for School Service Personnel, Department of Public Instruction, Indianapolis.

Certification for School Services Personnel

I. The School Services Personnel Certificate, Provisional

The School Services Personnel Certificate, Provisional, qualifies the holder to perform the school service endorsed on the certificate in the public schools of Indiana for five years from date of issue. Applicants will be qualified for the School Services Personnel Certificate, Provisional, when they:

Complete the required graduate level program for the school service area in which endorsement is sought.

Hold the advanced degree required for the school service area in which endorsement is sought. This will be a master's degree (unless otherwise designated) in teacher education from an institution of higher education accredited to offer graduate programs in school services.

Have professional certification for teaching in the public elementary, junior high, or secondary schools of Indiana, or specified equivalency.

Are recommended for the School Services Personnel Certificate, Provisional, by the institution of higher education in which the qualifying program has been completed.

G. Endorsement for Supervisor of School Libraries and Instructional Materials Services

1. Candidates for endorsement for Supervisor of School Libraries and Instructional Materials Services, Provisional, will meet the general requirements for the School Services Personnel Certificate, Provisional.
   a. Candidates will have three years of experience as a school librarian.

2. The minimum program for endorsement for Supervisor of School Libraries and Instructional Materials Services is:
   a. Ten semester hours of graduate credit in library science distributed in the following areas.
      (1) Selection and use of printed and audiovisual materials.
      (2) Preparation of printed and audiovisual materials.
      (3) Advanced problems of supervision and administration in school libraries and/or instructional materials centers.
   b. Nine to 12 semester hours of graduate credit from the following areas:
      (1) School administration and/or supervision.
      (2) History and/or philosophy of education.
      (3) Educational psychology and/or measurement and evaluation.
   c. Electives in library science and/or closely related areas.

K. Endorsement for Audiovisual Supervisor

1. Candidates for endorsement for Audiovisual Supervisor will meet the general requirements for School Services Personnel Certificate, Provisional.
   a. Candidates will hold an endorsement for either Audiovisual Communications, Professional, or School Libraries and Audiovisual Services, Professional.

2. The minimum program for endorsement for Audiovisual Supervisor is:
   a. Ten semester hours in audiovisual communications beyond the requirements for professional endorsement in audiovisual communications, distributed over the following areas: utilization, selection and circulation of audiovisual materials; preparation of audiovisual materials (including graphics, projected and nonprojected materials, radio and television programs); and administration of audiovisual materials programs.
   b. Ten semester hours of education courses

distributed over the following areas: school administration, curriculum, supervision, educational psychology, philosophy, and measurement and evaluation.

c. Electives in related areas to strengthen the candidate's competencies in the general area of instructional materials.

II. The School Services Personnel Certificate, Professional

A. The School Services Personnel Certificate, Professional, is valid for life unless revoked for cause.

B. Minimum qualifications for the School Service Personnel Certificate, Professional, are:

1. Three years of experience, subsequent to its issue, as a practitioner in the area in which the candidate holds endorsement on the School Services Personnel Certificate, Provisional.

2. A total of 60 semester hours of graduate credit above the baccalaureate degree in the area of specialization or cognate areas in school services unless a higher degree or specific program is indicated.

3. Recommendation of the institution of higher education in which the qualifying program for the professional certificate was completed.

C. The school services area or areas in which the candidate is qualified will be endorsed on the School Services Personnel Certificate, Professional.

# Iowa

In Iowa as in Pennsylvania, certification is accomplished by state-approved programs at institutions of higher learning.

The following excerpt is from a letter dated 1-29-70 to Dr. William F. Grady, Chairman, Certification Committee, from Mr. Virgil Kellogg, Audiovisual Consultant, State Department of Public Instruction, Des Moines:

Iowa has an endorsement from EDUCATIONAL MEDIA SPECIALIST:

"Authorization to provide service as an educational media specialist in kindergarten and grades one through 14. The applicant shall have met the requirements for a professional certificate endorsed for elementary or secondary school teaching and have completed an approved master's degree program in this special service area."

# Massachusetts

The following is taken from a document entitled Certification of Audio-Visual Media Specialists, the Commonwealth of Massachusetts Department of Education.

Certification of Audiovisual Media Specialists

Any person who shall have been employed as an audiovisual media specialist prior to September 28, 1971 in a Massachusetts public school is exempt from certification as an audiovisual media specialist.

Anyone certified for employment in a Massachusetts public school or legally exempt by virtue of service prior to July 26, 1951, and who is employed as an audiovisual media specialist and who prior to September 28, 1974, requests certification as an audiovisual media specialist, shall be so certified if he/she presents a letter from the superintendent of schools of the employing school district validating an employment.

Audiovisual Media Specialist
Certification Requirements
(Effective September 28, 1974)

1. Bachelor's or higher earned degree from an accredited or approved college or university.

2. A teaching certificate valid for service in Massachusetts public schools.

3. A candidate shall submit evidence of her/his completion of 30 semester hours of media preparation including the following areas:
- Audiovisual Media Design and Preparation
- Administration of Audiovisual Media Services
- Selection and Utilization of Instructional Materials
- Learning and Communication Theory
- Cataloging and Classification of Instructional Materials

# Minnesota

The following excerpt is taken from the document The Administrative Manual for Minnesota Public Schools, 1966 edition and Code VI--A--2e, August 3, 1959, Rev. 9-67.

EDU 344 Audiovisual Directors and Coordinators

(a) Director's Certificate of Qualifications

1. The Director of Audiovisual Education is a teacher in charge of the audiovisual program in the entire school system. To qualify for a Director's certificate a person shall meet the following requirements:

a. Have a valid teaching certificate based on a four-year degree.

b. Have at least two years of successful teaching experience.

c. Have earned credits in a course in each of the following areas:
- Educational administration
- Elementary school curriculum
- High school curriculum
- Supervision and improvement of instruction

d. Have earned at least 10 semester hours of credit in audiovisual courses,

including the areas of method, production laboratory, selection, and administration.

2. Any person who has served as a half- or full-time director of a school system prior to the effective date of these regulations may offer such successful experience in lieu of credits in the areas listed in (a)1.d. above on the basis of three years of successful experience for any two-semester credit course.

3. Beginning with the school year 1962-63 all persons holding positions as Audiovisual Directors must meet the above requirements.

(b) Coordinator's Certificate of Qualifications

1. The Coordinator of Audiovisual Education is a teacher in charge of the audiovisual program in any single building of a school system or a school system having only one attendance unit. To qualify for a coordinator's certificate a person shall meet the following requirements:

a. Have a valid teaching certificate.
b. Have a course in each of any two of the areas listed in (a) 1.c. above.
c. Have at least one course in audiovisual methods and one course in audiovisual administration.

2. Any person who has served as Coordinator in a school building for three years prior to the effective date of these regulations may offer successful experience in lieu of credits in the areas listed in (b) 1.c. above on the basis of two semester credits for each three years of successful experience.

3. Beginning with the school year 1962-63 all persons holding positions as Audiovisual Coordinators must meet the above requirements.

EDU 350 Media Supervisor, Effective July 1, 1974

(a) Any person working at a specialized professional level in both print and nonprint areas, who is responsible for the administration of a media program and for the direction or supervision of the work of other professional personnel, shall hold the Media Supervisor certificate. Minimum requirements for certification as a Media Supervisor, valid for two years, are:

1. A valid continuing certificate as a Media Generalist, or

-- The completion of all requirements for the continuing certificate as Media Generalist

OR

-- The completion of all requirements for the entrance certificate as a Media Generalist and three years of supervisory experience as a media professional (library or audiovisual); and

2. Three or more years of successful experience in the areas of media while holding a certificate valid for the position in which the media experience was obtained; and

3. Completion of a master's degree in a recognized graduate school in a program approved by the State Department of Education in a college or university which has been approved for teacher education by the State Board of Education.

a. The approved program shall consist of not less than 18 quarter hours or the equivalent at the graduate level of work in media in addition to that required for the Media Generalist certificate.
b. Each approved program shall include work to develop competencies in all of the following areas:
-- Supervision and improvement of instruction
-- General educational administration (early childhood through grade 12)
-- General theory of learning
-- Advanced administration and management of print and nonprint media activities
c. Programs submitted for approval shall include:
-- Statements which relate all of the areas enumerated in 3.b. above to competencies to be developed.
-- Statements which relate to competencies to be developed to components of the program.
-- Statements which indicate means for assessment of competencies

(b) Upon expiration of the entrance certificate, renewal of the Media Supervisor certificate for five years is contingent upon one or more years of successful experience as a Media Supervisor while holding the Media Supervisor certificate.

(c) The continuing certificate may be renewed according to general regulations of the State Board of Education pertaining to continuing education.

Adopted by the Minnesota State Board of Education April 12, 1971.

EDU 349 Media Generalist, Effective July 1, 1974

A Media Generalist is one who is qualified to work at a specialized professional level in both print and nonprint areas (library science, audiovisual education, and other emerging instructional technologies) in an elementary or secondary school or in a school district.

(a) Any person working more than half time as a specialized professional responsible for programs of instruction in both print and nonprint areas shall hold a certificate as a Media Generalist. Minimum requirements for certification as a Media Generalist, valid for two years, are:

1. A valid certificate to teach in the elementary or secondary schools of Minnesota which is in force at the time of application for the certificate of Media Generalist; and

2. Two years of successful teaching experience while holding a certificate valid for the position in which the teaching experience was obtained; and

3. Completion of a program in media and related fields approved by the State Department of Education.

a. The approved program shall consist of not less than 36 quarter hours or the equivalent in media and related fields.
b. Each approved program shall include work to develop competencies in all of the following areas:
   -- Guidance in reading, listening and viewing
   -- Print and nonprint teaching methods and materials in the classroom
   -- Curriculum development (early childhood through grade 12)
   -- Evaluation and selection of print and nonprint materials
   -- Education technology
   -- Administration and management of print and nonprint media activities
   -- Electronic production
   -- Nonelectronic production
   -- Reference service and materials
   -- Classification and cataloging of print and nonprint materials
c. Programs submitted for approval shall include:
   -- Statements which relate all of the areas enumerated in 3.b. above to competencies to be developed.
   -- Statements which relate competencies to be developed to component of the program.
   -- Statements which indicate means for assessment of competencies.

(b) Upon expiration of the entrance certificate, renewal of the Media Generalist certificate for five years is contingent upon one or more years of full-time successful experience, or two or more years of half-time successful experience, as a Media Generalist while holding the Media Generalist certificate.

(c) The continuing certificate may be renewed according to general regulations of the State Board of Education pertaining to continuing education.

Adopted by the Minnesota State Board of Education, April 12, 1971.

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# New York

The following excerpt is from the document Report, October 1969, The University of New York, State Education Department, Division of Educational Communications, Albany, New York, and entitled "Certification for Directors of Educational Communications."

## Certification for Directors of Educational Communications

Those who are not now certified as Instructional Administrators -- Supporting Services, Directors of Educational Communications should check the new requirements for school administrators and supervisors. In April 1969, the State Board of Regents approved an amendment to the Regulations of the Commissioner of Education. The amendment is designed to make the requirements for school administrators and supervisors conform with the Education Law.

Effective September 1, 1969, two types of certification will replace the 12 areas of certification previously covered. Instead of issuing separate certificates, the superintendent of schools, supervising principal, or district principal will receive certificates valid for a school district administrator; other school administrators and supervisors will be certified as school administrators and supervisors.

### Amendments to Regulations of the Commissioner of Education Pursuant to Section 207 of the Education Law (Effective September 1, 1969)

School Administrator and Supervisor. (Illustrative titles: deputy, associate, assistant superintendent, school business administrator, principal, supervisor, director, coordinator, assistant principals.)

(a) Certificate required: Any person employed as the deputy, associate or assistant superintendent, or school business administrator shall hold this certificate. A person serving more than 25 percent (10 periods per week) of her/his time in any other administrative and/or supervisory position shall hold this certificate.

(b) Permanent certificate:
(1) The candidate shall have completed a program registered and/or approved by the Department for the preparation of administrators and supervisors; or 30 semester hours of graduate study. The 30 semester hours shall include 18 semester hours of graduate study in or related to the fields of educational administration and supervision and an approved administrative/supervisory internship under the supervision of a practicing school administrator and of a representative of a sponsoring institution of higher education.

(2) Substitution: One year of satisfactory full-time experience in an administrative or supervisory position may be substituted for the internship.

(c) Experience:
(1) Persons appointed as deputy, associate, assistant superintendent of schools, or member of a board of examiners shall have five years of teaching and/or administrative and/or supervisory experience in the public schools.

Persons appointed in other administrative and/or supervisory positions other than noted in (1) shall have three years of approved teaching and/or administrative and/or supervisory experience.

(d) Exceptions to stated preparation:
(1) Persons employed in a position for which no certificate existed prior to the effective date of this section of regulations may be issued a statement of continued eligibility, provided that three years of service have

been completed by the date these requirements become mandatory.

(e) Persons holding the certificate entitled School District Administrator, issued under this section, may be employed in any administrative or supervisory position without additional certification.

# North Carolina

The following excerpt is from the document Teaching in North Carolina, Certification -- Policies/Practices, October 1969.

Audiovisual Director's Certificate

There are two levels of preparation, the master's degree or fifth-year level, and the sixth year involving an additional year of graduate study. The sixth year should be a continuation of the fifth-year program, with an increase in depth as well as variation of relative emphasis.

The master's degree program is required for a certificate, and an optional certificate is issued on the sixth-year program.

a. Requirements for Issuance of Certificate on the Master's Degree

1. Hold or be qualified to hold the Class "A" Teacher's Certificate.

2. Have three years' teaching experience within the past five years.

3. Recommendation of applicant by the preparing institution in which the major portion of graduate work was done.

4. Hold a master's degree from an institution of higher learning, with recognized graduate standards.

5. Have a minimum of 30 semester hours of graduate credit, distributed as follows:
   (a) Educational Communications . . . . . 9
   Organization and administration of the audiovisual center
   Production of audiovisual materials
   Supervision and utilization of audiovisual materials
   (b) Foundation Courses in Education . . . 3
   Philosophy of Education
   History of Education
   Principals of Education
   Statistical Methods
   (c) Organization and Administration . . . 3
   Organization and Administration of the Elementary and Secondary School
   Pupil Personnel Administration and Guidance
   School-Community Relations
   (d) Curriculum and Supervision . . . . . 3
   The School Curriculum
   Techniques of Supervision
   (e) Electives . . . . . 12
   According to individual needs, including opportunity to pursue subject matter courses appropriate to the teaching field of the candidate.

b. Requirements for Issuing Certificates on the Sixth-Year Level:

1. Hold or be qualified to hold the Class "A" or Graduate Teacher's Certificate.

2. Have three years of teaching experience within the past five years.

3. Recommendation of applicant by the preparing institution in which the major portion of the graduate work is done.

4. Have 30 semester hours of graduate credit beyond the master's degree from an institution approved by the proper agency for two years of graduate study.

5. The 30 semester hours of graduate credit should include advanced study in the following areas:
   -- Educational Communications
   -- Foundation Courses in Education
   -- Organization and Administration
   -- Curriculum and Supervision
   -- Electives

# North Dakota

The following excerpt is from the document Media Specialist Credential, Department of Public Instruction, Bismarck, North Dakota, Revised -- effective July 1, 1970.

Media Specialist Credential

Terminology

Administrative and organizational patterns for materials and services vary among schools as does the terminology used to describe them. We have school libraries, instructional materials centers, learning resource centers, library media centers, and others. In addition to that part of the school bearing one of these names, many schools also have a separate audiovisual department which, in turn, is designated in a variety of ways -- as a communications center, audiovisual center, instructional media center, or other title. Confusion of terminology also exists with reference to the personnel, programs and the centers or departments concerned with media.

For purposes of certification in North Dakota, the definitions developed by a Joint Committee of the American Association of School Librarians and the Department of Audiovisual Instruction (now the Association for Educational Communications and Technology) in cooperation with an Advisory Board consisting of representatives from 30 professional and civic associations will be used. (Taken from the publication Standards for School Media Programs, available from AECT and NEA.) They are as follows:

Media: refers to all modes of communication including print and audiovisual forms and their accompanying technology

Media Program: refers to all the instructional

and other services furnished to students and teachers by the media specialists

Media Specialist: refers to an individual who meets the requirements for teaching and who has professional preparation in educational media

Unified Program

The philosophy of a unified program of audiovisual and printed services and resources in the individual school is one that has continuously grown and been strengthened in the last 30 years. Given adequate financial support, this fusion of resources and services provides optimum service for students and teachers. Many schools now have unified media programs. For those others that have separate audiovisual departments and school libraries, it is recommended that, whenever possible, these services be combined, administratively and organizationally, to form a unified program. New schools should start with a unified media center and program of services.

While North Dakota is working toward unified certification and unified media programs, the programs are at varying stages of evolution. There are separate library and audiovisual programs that will continue to exist because of the nature of organizational or administrative factors in the local circumstances.

In transitional as well as in traditional situations, it will be necessary to adjust professional education requirements in relation to already appointed staff. Therefore, certification will be possible in four areas of specialization as outlined in the requirements below. This, no doubt, will be necessary until unified programs are more fully developed and professional courses in the audiovisual area become more readily available.

Requirements for the Media Specialist Credential (Effective July 1, 1970)

I. Library Only
   A. Educational Requirements
      1. Bachelor's degree
      2. Teacher's certificate
      3. Minor in library science (at least 16 semester hours)
      4. Recommended: Classroom teaching experience

II. Library - Audiovisual Combination
   A. Educational Requirements
      1. Bachelor's degree
      2. Teacher's certificate
      3. One or more years of classroom teaching experience
      4. Twenty-six semester hours in media education of which a minimum of 16 semester hours is required in library science and 10 semester hours in audiovisual education to be selected from such courses as the following:
         a. Classification and cataloging
         b. Selection of media
         c. Reference
         d. Materials for secondary education
         e. Materials for elementary education
         f. Media administrators
         g. Utilization of media
         h. Design and production of materials
         i. Learning theory
         j. Special problems in media (research) -- (Maximum of four semester hours)

III. Audiovisual Only (does not meet requirements for person designated to be in charge of a library)
   A. Educational Requirements
      1. Bachelor's degree
      2. Teacher's certificate
      3. One or more years of classroom teaching experience
      4. Hold 12 semester credits distributed over the following:
         a. Design and production of audiovisual materials
         b. Library (cataloging)
         c. Television
         d. Programed instruction
         e. Selection of audiovisual materials
         f. Utilization of media
         g. Communication theory

IV. Media Director
   A. Educational Requirements
      1. Must meet requirements as outlined for II (Library - Audiovisual Combination) plus:
      2. MSLS (Master's of Science in Library Science), or master's degree, including graduate training of at least 12 semester hours of course work distributed over courses such as the following:
         a. Educational administration
         b. Elementary curriculum
         c. Secondary curriculum
         d. Supervision
         e. School finance
         f. School law
         g. Educational psychology
         h. Philosophy of education

Experience Credit

Any person who has served as a librarian or as a director of audiovisual materials may offer such successful experience in lieu of credits with the following limitations:

1. The position must have had at least 20 percent released time for media purposes.
2. A maximum of three semester hours may be gained in this manner on the basis of two years of successful experience for one semester credit.
3. Experience must have been prior to the 1969-70 school year.
4. Experience claims are subject to evaluation by the Department of Public Instruction.

Effective Date

Beginning with the 1969-70 school year, all persons designated by their school officials as media specialists should meet the requirements as

listed in one of the above categories.

Credential Renewal

The life of the credential is a period of five years. To renew a credential when it expires, the candidate will need to meet the following minimum requirements:

1. Must earn a minimum of four semester hours (six quarter hours) of undergraduate or graduate credit. These credits may be distributed over areas of library, audiovisual education, curriculum, and communications.
2. Provide acceptable evidence of successful performance in terms of professional standards.

# Ohio

The specifics of the Ohio audiovisual personnel certification program were identified via long distance telephone call on March 20, 1970 with Dr. Clyde K. Miller, Director, Division of Instructional Materials, State Department of Education, 3201 Alberts Street, Columbus, Ohio 43215.

Ohio is one of the seven states currently making revisions in the existing audiovisual personnel certification program.

# Oklahoma

The following excerpt is from the document Audiovisual Specialist Certificate, State Department of Education, Oklahoma City, Oklahoma.

Audiovisual Specialist
(Standard Certificate -- Minimum Essentials)

Formal admission to graduate study in an approved program for the certificate and completion of 30 semester hours in appropriate graduate level courses.

A. A minimum of 15 semester hours of graduate level educational media courses. (A maximum of three semester hours of the 15 hours of credit may be at the baccalaureate degree level.)
   1. One course in each of the following:
      a. Utilization (effective use of media in the classroom)
      b. Production of teacher-made materials (transparencies, charts, lettering, etc.)
      c. Administration (organization and supervision of media collections and programs)
   2. Elective courses may be selected from the following:
      a. Communications (message design, audience analysis, related research)
      b. Media practicum
      c. Programed learning
      d. Educational television and radio
      e. Photographic production
      f. Library science

B. A minimum of 15 semester hours of graduate level courses in the following:
   1. One course in each of the following:
      a. Elementary and/or secondary curriculum development
      b. Supervision of instruction
   2. Elective courses may be selected from the following:
      a. Psychology of learning
      b. School administration
      c. Methods of research
      d. Measurements, statistics and/or evaluation
      e. Educational systems design
      f. Computer programming, etc.

Provisional Certificate

Formal admission to graduate study in an approved program for the certificate and completion of 18 semester hours in appropriate graduate level courses.

A. A minimum of 10 semester hours of graduate level educational media courses. (A maximum of three semester hours of the 10 hours of credit may be at the baccalaureate degree level.)
   1. One course in each of the following:
      a. Utilization (effective use of media in the classroom)
      b. Production of teacher-made materials (transparencies, charts, lettering, etc.)
      c. Administration (organization and supervision of media programs and collections)
   2. Elective courses may be selected from the following:
      a. Communications (message design, audience analysis, related research)
      b. Media practicum
      c. Programed learning
      d. Educational television and radio
      e. Photographic production
      f. Library science

B. A minimum of eight semester hours of graduate level courses in the following:
   1. One course in each of the following:
      a. Elementary and/or secondary curriculum development
      b. Supervision of instruction
   2. Elective courses may be selected from the following:
      a. Psychology of learning
      b. School administration
      c. Methods of research
      d. Measurements, statistics and/or evaluation
      e. Educational systems design
      f. Computer programming, etc.

Temporary Certificate

Eight semester hours in appropriate graduate level courses. (A maximum of three semester hours of the eight hours of credit may be at the baccalaureate degree level.)
   1. One course in each of the following:
      a. Utilization (effective use of media in the classroom)

b. Production of teacher-made materials (transparencies, charts, lettering, etc.)

2. Balance may be selected from the following:
   a. Administration (organization and supervision of media collections and programs)
   b. Communications (message design, audience analysis, related research)
   c. Programed learning
   d. Media practicum
   e. Photographic production (motion and still)
   f. Computer programming
   g. Educational television and radio
   h. Library science

# Oregon

The following data is excerpted from two papers Desired Competencies in the Five Preparation Areas of Educational Media Norms and O.E.M.A. Certification Norms Under Consideration by the Oregon Board of Education.

The program provisions were approved as of December 3, 1971.

O.E.M.A. Certification Norms Under Consideration by the Oregon Board of Education

K. Educational Media (printed and audiovisual forms of communication and information and their accompanying technology)

1. Basic norm
   21 quarter hours in a planned program designed to develop competencies with which user guidance and media services can be effectively provided. Competencies will be developed in each of the following areas: information services, administration of educational media programs, organization of educational media, selection and utilization of educational media, and design and production of educational media.

2. Standard norm
   36 quarter hours in a planned program to include the 21 quarter hours in the basic norm and 15 additional quarter hours in one or more of the areas specified in the norm requirements.

Desired Competencies in the Five Preparation Areas of Educational Media Norms (Library Science Norms Review Subcommittee)

1. Information Services. To include preparation in: Identifying and evaluating sources of information and in supplying information to meet the personal and curricular needs of users.

2. Organization of Educational Media. To include preparation in: Methods of processing, cataloging and placement of educational materials for efficient use and easy retrieval.

3. Administration of Educational Media Programs. To include preparation in: Developing leadership for the planning and optimum operation of the school media program.

4. Selection and Utilization of Educational Media. To include preparation in:
   a. Evaluating and selecting media and mediaware
   b. Identifying effective procedures for the acquisition and distribution of media and mediaware
   c. Identifying efficient methods for making media accessible and available
   d. Identifying processes for building a quality media collection in terms of users
   e. Assisting students, teachers and other users to evaluate, select and utilize appropriate media and mediaware
   f. Utilizing instructional television and radio broadcasts to their best advantage as an integral part of classroom instruction

5. Design and Production of Educational Media. To include preparation in:
   a. Combining basic skills in mounting, laminating, lettering, and chart preparation
   b. Developing competency to participate in or direct graphic or photographic productions related to curriculum needs

# Pennsylvania

Certification in the State of Pennsylvania is based upon state-approved programs at various institutions of higher learning.

Currently the following institutions in Pennsylvania have approved programs for certifying media specialists:
-- Indiana University of Pennsylvania
-- Pennsylvania State University
-- Temple University
-- The University of Pennsylvania
-- University of Pittsburgh
-- West Chester State College
-- Shippensburg State College
-- Clarion State College

The following excerpt is from the document Regulations of the State Board of Education of Pennsylvania, Chapter 10, "Certification of Professional Personnel," Harrisburg.

10-130 Program Approval -- To be authorized to conduct programs that lead to certificates for professional positions, an institution shall:
   a. Be accredited by the Middle States Association of Secondary Schools and Colleges as a four-year degree-granting institution of higher learning.
   b. Be evaluated and approved as a teacher-preparing institution to offer specific programs leading to certification in accordance with procedures established by the Superintendent of Public Instruction.
   c. Report to the Superintendent of Public Instruction, for approval, all planned

changes in previously approved programs. This report shall be made 90 days prior to the implementation of the planned changes.

10-210 General Requirements -- An applicant for a certificate shall have completed, in addition to all legal requirements, a program of teacher education approved by the Superintendent of Public Instruction, and shall have the recommendation of the preparing institution.

Preparation in general education, professional education, and specialization studies shall be in accordance with standards established by the Superintendent of Public Instruction.

10-222 Instructional II (Permanent) -- The Instructional II Certificate shall be a permanent certificate issued to an applicant who shall have completed three years of satisfactory teaching on an Instructional I Certificate and who shall have completed 24 semester credit hours of post-baccalaureate or graduate study at a regionally accredited institution. In addition, the applicant shall have received the recommendation of the superintendent of the school district in which her/his most recent service was performed, or, if the service was in a school district with a supervising principal, the recommendation of the appropriate county superintendent.

Six of the 24 semester credit hours may be satisfied through in-service programs approved by the Superintendent of Public Instruction and conducted by a school district, or a group of school districts, in cooperation with a preparing institution.

10-225 Endorsement to an Instructional Certificate -- An endorsement by the Superintendent of Public Instruction shall extend an existing instructional certificate to include an additional subject or area of specialization. The applicant shall have completed an approved program and shall have been recommended by the preparing institution.

10-230 Educational Specialist Certificate -- The Superintendent of Public Instruction shall issue the Educational Specialist Certificate to a person whose primary responsibility shall be to render professional service other than classroom teaching. The service shall be directly related to the personal welfare of the learner and may include service to the needs of other professional personnel working with learners.

Certificates shall be issued for Educational Specialist areas for which program approval has been granted.

The Educational Specialist Certificate shall be issued on three levels.

Instructional Media Specialist (K-12)

The instructional media specialist is concerned with the improvement of the learning processes and instruction through the use of appropriate instructional media by teachers and pupils. The specialist provides the philosophical and technical consultative services to assure more effective use of available media.

The following standards pertain to college programs for the preparation of instructional media specialists:

STANDARD I The program shall require previous, or concurrent, acquisition of a valid permanent instructional certificate.

STANDARD II The program shall provide studies and experiences which will increase the candidate's ability to:
a. evaluate the learners' instructional media requirements
b. write measurable behavioral objectives for intended learnings of pupils
c. identify learning strategies of pupils

STANDARD III The program shall assure specialist competencies in production techniques, operational techniques, organization of programs and administrative-supervisory practices related to instructional media services for a school or school system.

STANDARD IV The program shall include studies and experiences in group processes which develop leadership techniques for working with teachers, pupils and administrative-supervisory personnel.

STANDARD V The program shall assure increased comprehension of the principles of curriculum, and the application of instructional media techniques to the curriculum.

STANDARD VI The program shall provide studies and experiences which develop knowledge of effective media which is unique for specific minority groups in our pluralistic culture.

STANDARD VII The program shall assure completion of supervised school experiences in the various roles of a classroom teacher and educational media specialist.

January 1970

# South Dakota

The following data is taken from a document entitled Qualifications for Media Personnel.

Qualifications for Media Personnel

Level II Accreditation: A qualified media specialist who holds a teaching certificate with 10 semester hours in library science of which two to three hours must be in audiovisual courses.

Level I Accreditation: A qualified media specialist who holds a teaching certificate with 15 semester hours in library science of which four to six hours must be in audiovisual courses.

Level I Exemplary Accreditation: Must meet or exceed NCA Criteria.

NCA Criteria for Accreditation: Librarians shall meet the classroom teacher requirements with reference to degree and professional preparation and also shall have a minimum of 18 semester hours of library science. Persons employed principally as audiovisual specialists shall have at least 12 semester hours of credit in this field.

# Texas

The following is excerpted from the Proposed Certification for Learning Resources Specialists.

Joint Proposal -- March 1971. Texas Association of School Librarians and Texas Association of Educational Technology.

Class Title: Learning Resources Specialist I

Description of Positions Assigned to Class Title: Supervises a school Learning Resources Center or functions as one of several Learning Resources Specialists on a major campus or in a district center.
Required Preparation and Education: Provisional Certificate

Class Title: Learning Resources Specialist II

Description of Positions Assigned to Class Title: Supervises a Learning Resources Center on a major campus or functions as one of several Learning Resources Specialists in a district or regional center.
Required Preparation and Education: Professional Certificate

Class Title: Learning Resources Supervisor or Administrator

Description of Positions Assigned to Class Title: As provided in the Texas State Public Education Compensation Plan.
Required Preparation and Education: Fully Certified as Learning Resources Specialist, Supervisor or Administrator.

The Preparation of Learning Resources Specialists

A. The Provisional Learning Resources Specialists Certificate

The Provisional Learning Resources Specialists Certificate shall be issued for five years and shall be renewable upon completion of six semester hours leading to the professional learning resources certificate. The Provisional Learning Resources Specialist Certificate shall be issued upon the recommendation of an approved college to a person who:

1. Has completed an approved teacher certification program.
2. Has completed a bachelor's degree.
3. Has demonstrated satisfactory performance in competencies stipulated by the profession.
4. Has completed the following program.

The program for the Provisional Learning Resources Specialists Certificate shall include 18 semester hours (at least 12 of which shall be graduate credit) which shall provide minimum preparation for the campus unit level. The program shall include the following:

1. Nine semester hours in general learning resources courses which shall provide the knowledge, skill and techniques concerned with organization, evaluation, selection, administration, and utilization of learning resources in all formats applicable to the campus unit level.

2. Six semester hours in specialized learning resources courses concerned with:
   a. Design and local production of instructional materials.
   b. Instructional design and curricular development employing media to accomplish specific objectives.

3. Three semester hours in learning resources courses concerned with materials in all formats for children and/or young adults.

B. The Professional Learning Resources Specialists Certificate

This certificate shall be issued upon the recommendation of an approved college to a person who:

1. Has completed requirements for the Provisional Learning Resources Specialists Certificate.
2. Has completed a master's degree.
3. Has completed three years of successful teaching in an approved school -- at least one year of which shall have been in a learning resources center.
4. Has demonstrated a satisfactory level of performance in competencies stipulated by the profession.
5. Has completed the following program.

The program for the Professional Learning Resources Specialists Certificate shall include 18 semester hours at the graduate level which shall provide preparation for supervision of a learning resources center on a major campus unit level, or a supervised position at the district or regional level. The program shall include the following:

1. Specialization -- 12 semester hours in either educational technology or library and information sciences.
   a. The educational technology program includes, but shall not be restricted to, the following areas:
      -- message design, media production, photographic processes
      -- communications theory and applications
      -- instructional systems: design and implementation
      -- management theory and applications
      -- physical facilities: design and equipment specifications
      -- research methods
      -- sociological aspects of mass media
      -- television
      -- computer-assisted instruction
      -- specialized instructional resources electives
      -- internship or practicum
   b. The library and information sciences program includes, but shall not be restricted to, the following areas:
      -- information science
      -- automation and technology

-- organizational systems: relationships and articulation; design and analysis
-- research methods, statistics
-- management theory and practices
-- communications theory and practices
-- information networks
-- specialized instructional resources electives
-- internship or practicum

2. Resource Area: six semester hours which shall be outside the professional specialization and which should include professional development and leadership in the areas of curriculum structure and practices, student growth and development, instructional methods, psychology, and related areas.

C. The Learning Resources Supervisor or Administrator Certificate

This certificate shall be issued upon the recommendation of an approved college or university to a person who:

1. Has completed the requirements for a professional learning resources specialist certificate.
2. Has completed an additional six semester hours of graduate work in the area of learning resources specialization beyond the professional certificate.
3. Has completed the requirements in supervision for a supervisor's certificate or in administration for an administrator's certificate.
4. Has completed six semester hours of electives on the graduate level outside the area of specialization.
5. Has completed three years of successful experience as a learning resources specialist, or the equivalent.
6. Has demonstrated satisfactory levels of performance in competencies stipulated by the profession.

# Utah

The following excerpt is taken from two documents Requirements for Professional Certificate, Instructional Media Endorsement and Requirements for Basic Professional Certificate, Instructional Media Endorsement, Utah State Board of Education, Division of Instructional Media, Salt Lake City, Utah.

Requirements for Professional Certificate
Instructional Media Endorsement

An applicant for a Professional Instructional Media Certificate for elementary or secondary schools must present evidence:

1. That he/she has met requirements for a teacher's certificate for the appropriate level to which he/she is assigned.

2. That he/she has completed a master's degree from an approved program of 55 quarter hours of approved graduate credit including:

3. Thirty quarter hours of media classes with some study in each of the following areas:
   a. Cataloging and classification of all types of media
   b. Selection and utilization of print materials
   c. Selection and utilization of audiovisual materials
   d. Selection and utilization of educational television
   e. Selection and utilization of programed materials
   f. Organization and procedures (administration)
   g. Production of audiovisual materials
   h. Mass media
   i. Information retrieval and data processing
   j. Human and public relations
   k. Leadership and supervision
   l. Communication theory

4. That he/she has at least three years of successful experience in educatio-, one year of which must be as a classroom teacher.

5. That he/she has the recommendation of an approved institution.

Requirements for Basic Professional
Certificate -- Instructional Media Endorsement

An applicant for a Basic Professional Certificate with the Instructional Media Endorsement for elementary or secondary schools must present evidence:

1. That he/she has met requirements for a teacher's certificate for the appropriate level to which he/she is assigned.

2. That he has a minimum of 12 quarter hours of media classes with some study in each of the following areas:
   a. Cataloging and classification
   b. Organization and procedures
   c. Production of audiovisual materials
   d. Selection and utilization of print materials
   e. Selection and utilization of nonprint materials

3. May be renewed by presentation of nine quarter hours of credit which will apply toward the Professional Certificate with instructional media endorsement.

# Wisconsin

The following excerpt is taken from the document Wisconsin Administrative Code, State Department of Public Instruction, Madison.

Wisconsin Administrative Code

AUDIOVISUAL DIRECTOR - Media Specialist

This classification shall apply to those who direct, administer and/or provide those advisory, production and distribution services which implement teaching-learning situations with media in an organized fashion within an entire school system. The term "media" includes all technological aids to the instructional program such as films, recorded materials, radio, television, and other modern communication devices and materials such as pictures tures and graphics, three-dimensional materials, etc.

Persons will qualify as Audiovisual Directors (Media Specialists) who offer credits in the courses listed under B. below. Qualifications for a Director's Certificate:

A. General Requirements

1. Must possess a valid teaching certificate based on a four-year degree.

2. Should have at least three years of successful teaching experience.

B. Educational Requirements - minimum of 15 semester hours

1. A course or courses in curriculum - minimum of two semester hours. (A person qualifying with elementary school teaching experience will meet this requirement by acquiring credit in a high school curriculum course. A person with high school teaching experience will qualify with an elementary school curriculum course.)

2. Courses in audiovisual instruction (educational media) - minimum of 12 semester hours.
   a. Methods - basic audiovisual course
   b. Production of audiovisual materials
   c. Administration (audiovisual)
   d. Electives (such courses as ETV, programed learning, motion picture production, radio, photography, etc.)

A three-year Provisional Certificate may be granted to an individual without meeting the course requirements providing:

1. The applicant has served as an Audiovisual Director for a period of three years prior to 1967 with one-fourth or more released time devoted to such duties.
   a. Percentage of time is determined by actual released time from classroom or study hall duties for organized audiovisual activities. For example: If the audiovisual assignment is for two periods in a seven-period day, percentage of time is 2/7 or 28%.

2. He/she is presently designated as an Audiovisual Director with one-fourth or more released time for such duties.

Such Provisional Certificate may be renewed in three-year periods by completing satisfactorily two or more courses from B. 2. (above) within each three-year period.

AUDIOVISUAL COORDINATOR - Media Specialist

This classification shall apply to those who provide those advisory, production and distribution services which implement teaching-learning situations with media in an organized fashion within a single building housing a typically organized grade unit of a school system, such as an elementary school, a junior high school, or a senior high school.

The term "media" includes all technological aids to the instructional program such as films, recorded materials, radio, television and other modern communications devices and materials such as pictures and graphics, three-dimensional materials, etc.

Qualifications for a Coordinator's Certificate:

A. General Requirements

1. Possess a valid teaching certificate based on a four-year degree.

B. Educational Requirements -- minimum of four semester hours

1. Two courses in audiovisual instruction, one of which shall be a basic audiovisual methods course.

Beginning with the school year 1967-68, all persons designated by their school officials as an Audiovisual Director or Audiovisual Coordinator must meet the requirements as listed above.

# Wyoming

The following excerpt is from Certification Regulations, January 1, 1969 -- Revision.

Section 8-i. AUDIOVISUAL

1. Initial Certificate

   a. Eligibility for an Initial Certificate (P.8).
   b. A minimum of one year of classroom teaching experience is desirable.
   c. A bachelor's degree in audiovisual education taken in an approved program, or
   d. Endorsement in some area of elementary and/or secondary teaching with a minimum of 12 semester hours in an approved program of audiovisual education.

The specific requirements and regulations for Initial Certificates are:

1. No teaching experience required.

2. A bachelor's degree in an approved teacher education program from an accredited college or university.

3. Applicants for an Initial Certificate who are otherwise eligible but who do not have recent credit shall have a deficiency for recent credit which for this purpose is defined as a minimum of five semester hours within the five years previous to September 1 of the year of certification.

4. Undergraduate preparation of 40 semester hours of general education including a distribution of work among the areas of social science, practical and applied arts, natural science and mathemetics, and humanities (English, fine arts, foreign languages, etc.).

5. Professional preparation of 20 semester hours for secondary teachers and 23 semester hours for elementary teachers including a requirement of course work in which the following areas are repre-

sented: foundations of education, human development and psychology, curriculum, methods and directed teaching or at least three years of successful school teaching experience verified by appropriate letters of recommendation provided the teaching has been done within the last six years in the appropriate elementary or secondary area.

2. Standard Certificate

a. Eligibility for a Standard Certificate (P.P. 8 & 9).
b. Academic preparation necessary for the initial endorsement plus six additional semester hours in audiovisual education.

The specific requirements and regulations for the Standard Certificate are:

1. All the requirements for an Initial Certificate.

2. Five semester hours of workshop (maximum of two hours) and/or college credit acquired during the term of the Initial Certificate plus the removal of any deficiencies.

3. Three years of successful teaching experience under the Initial Certificate, or five years of successful teaching experience outside of Wyoming.

4. Valid for a period of five years and renewable upon the completion of five semester hours of renewal credit.

3. Professional Certificate

a. Eligibility for a Professional Certificate (P.9).
b. A master's degree in audiovisual education taken in an approved program.

The Professional Public School Certificate, hereafter referred to as the Professional Certificate, is issued to teachers, administrators or pupil service personnel who have served the schools of Wyoming for a minimum of five years under regular annual contract and regular certification (under Initial and/or Standard Certificates), and whose qualifications in the areas of specialization extend beyond those required for a Standard Certificate specifically including the following:

1. Five semester hours of renewal credit.

2. Eight years successful teaching experience.

3. A master's degree, or its equivalent, in an approved program with 50 percent of the work in the area of specialization.

4. Certificate to remain valid for a period of 10 years, after which it must be renewed by verifying the acquisition of 10 additional semester hours which may include four State Department of Education workshop credits acquired within the 10 years, or the equivalent in professional growth credit, or an appropriate combination. (See Section 4-k, P.P. 7 and 8).

# THE ROLE OF THE MEDIA PROFESSIONAL IN EDUCATION

Kenneth Norberg
1967

The growing educational needs of our time have lead to an unprecedented demand for educational innovation. This has brought about in schools new relationships among the changing academic disciplines, behavioral sciences, communication technology, school personnel, and students. These new relationships among people, theories and things are producing better learning, more efficient use of human resources, and major changes in the materials, facilities and techniques of instruction.

It is in this context that the role of the media professional in education is changing from that of a keeper and dispenser of teaching aids to that of an analyst and designer of instructional systems who must be centrally involved in the planning of learning environments, and in providing for related support functions and evaluative procedures.

This paper sets forth the emerging role of the media professional, the unique contribution he/she makes to contemporary education, characteristic tasks he/she is currently performing at various educational levels, and the requirements of her/his professional preparation. This paper emanates from one section of the educational media profession. The authors do not presume to speak for all members or groups of that profession, but they have attempted to write from an inclusive perspective in an effort to related media totally to the needs of education.

## Technology in the Modern School

Of all the changes taking place in American society, none is more extensive or important than change in education. Here, rapid expansion, coupled with critical shortages and urgent need for change, has led to a growing realization that the schools must be more amply served by good teachers, and that good teaching under modern conditions requires adequate technological support. Also of great importance is the shift of attention from the teacher as imparter of information to the learner as the focal point of the education process -- a shift which frees the teacher for a more creative role, and frees the learner for more active participation coupled with a higher level of personal involvement in the direction of her/his own learning tasks. Hence, a modern instructional technology must be suited not only for group presentations by teachers, but also for a variety of independent study activities by students.

The resources for learning in the new school include not only the conventional library and "audiovisual" materials but also many newer resources such as programed materials, 8mm films, television, student response systems, dial access information retrieval facilities, computers, and others. Also, the newer media can no longer be regarded merely as instructional aids or "enrichment" but are recognized as integral and essential components of the instructional program.

## The Role of the Media Professional

With educational programs taking on these new directions, the role of the media professional becomes more clearly defined. Teachers, curriculum and supervisory personnel, and administrators work together closely as teams to examine, appraise and

A Position Paper Prepared for the Board of Directors of the Department of Audiovisual Instruction, National Education Association, by Kenneth Norberg, Editor; Wesley Meierhenry; Donald P. Ely; Jerrold Kemp; and Anna L. Hyer. Published in Audiovisual Instruction, Vol. 12, No. 10, pp. 1026-1029.

redesign instruction in a more systematic way. Each member of the team has important functions to perform, and they quickly find that with the variety and complexity of media available, plus the need to plan and prepare additional materials locally, a key member must be a professional whose special skills relate directly to the selection, creation and management of materials and media. There is also a trend toward the planning of instructional systems on a comprehensive scale in which the media professional plays a critical role.

Specifically, the media professional:

1. Works with appropriate educational leaders to design learning experiences and to recommend both commercial and locally prepared instructional media/materials suited to specific instructional objectives.

2. Assumes responsibility for the logistics of instruction (e.g., arranges for making available, or for planning and preparing, specific materials and related equipment).

3. Works directly (or indirectly) with teachers, supervisors and students to implement the program.

4. Participates in the continual evaluation, redesign and production of instructional materials, media and systems.

## The Emerging Shape of the Media Field

For the purposes of discussion, this brief paper refers to the field of "instructional communications and technology" and the "media" professionals who work in this field. The term "media" has been brought into common use partly by recent federal legislation which has set up programs supporting research and development in "educational media," and partly by the professional literature where current usage applies the term to the whole range of instructional materials and communications technology.

It should be noted that names are established by common usage and public acceptance -- not merely by formal pronouncement. Moreover, a name does not determine the nature of the thing it represents. But there are junctures at which a developing professional field must seize upon a name which in present usage projects a clear image of itself and the direction in which it is moving.

Instructional communications has always had a technological aspect, but the revolutionary technical changes of this century have radically altered and expanded this aspect of teaching so that we are now confronted with a new field of inquiry and professional specialization. This field has gradually emerged through the related efforts of specialists working in audiovisual education, in libraries, in educational broadcasting, in schools of communication, in psychological laboratories and classrooms, in programed learning, and in the planning of instructional systems. It has emerged through the organization and administration of programs of instructional services, through research, through the development and application of a vastly enlarged spectrum of media and materials to the processes of instruction. In view of these circumstances, it should be apparent that no existing professional specialization, nor any professional association, has an exclusive claim to the emerging field of instructional communications and technology, other than the willingness and competence of its members to accept and deal with the challenge of its critical tasks.

The administration of media services in many schools, colleges and universities is divided among such administrative units as the audiovisual center, the library, and the educational television station. Sometimes these services are partially or wholly integrated, as in the case of the instructional materials center, or units having still more inclusive functions, such as the instructional communications (learning resources) center. Such integrated programs require the leadership of a media generalist whose field of operation is not divided by the traditional separations between audiovisual, library, radio, television, etc. At this point in time, there is no compelling evidence that all media/communications/technological services should or must be combined in one unit, although proper coordination does require that they be integrated at the next higher level of administrative authority. At the same time, it must be recognized that the course of technological development in education calls for radical changes in conventional patterns of instructional services. Thus, one of the most significant and difficult problems confronting the media professional is to adapt existing administrative structures, or develop new ones, suited to the optimum functioning of a truly contemporary technology of instructional communications in education.

## Qualifications and Functions of the Media Professional

Whether he/she is the sole member of a school or school system media services program, or directs an extensive staff, the services of the media professional must be based on:

1. Insight into the learning and communication processes.

2. Understanding of curriculum and new instructional patterns.

3. Ability to inspire and gain the respect of other professional staff members.

4. Skill in the management of media services.

5. Comprehension of the broad spectrum of technology in instructional communications and its place in education.

Finally, the field of instructional communications and technology can best be defined by noting the functions which comprise the contemporary tasks of media specialists, and media generalists, working at various levels in education. The following list is descriptive of the services that such media professionals offer education. Like all professional tasks, the following have their technical and clerical aspects which may be distributed among the various appropriate staff members whose services support the work of the

media administrator and other professionals in the program.

MEDIA PROFESSIONALS IN THE INDIVIDUAL SCHOOL:

1. Consult with teachers regarding the use of a wide range of media in the solution of instructional problems.

2. Supervise the circulation and scheduling of instructional materials and equipment, the ordering of equipment and materials from sources outside the school.

3. Prepare teaching materials.

4. Assist with the selection of equipment and materials, as appropriate to the local organization of media services.

5. Provide in-service education for teachers in selection and use of instructional materials and techniques, usually on a person-to-person or small-group basis.

6. Supervise training of students and teachers in operation and use of equipment.

7. Maintain liaison and coordination with district-level media services.

8. Marshal extraschool instructional resources.

9. Help students use the technology of instructional communication.

10. Assist teachers and administrators in evaluating the results of the use of instructional materials and technological resources for teaching.

MEDIA PROFESSIONALS FUNCTIONING AT THE MULTISCHOOL LEVEL, IN DISTRICT, COUNTY OR REGIONAL PROGRAMS:

1. Coordinate selection and evaluation of instructional materials and other teaching resources.

2. Manage the organization, distribution and maintenance of instructional materials and equipment.

3. Work with teachers, psychologists and content specialists in the design and production of teaching materials to supplement those commercially available and those produced at the building level.

4. Work with administrators, curriculum specialists, supervisors, and teachers in the design and implementation of instructional systems, with particular regard to the implementation of communication functions.

5. Conduct workshops and other in-service education activities for teachers, supervisors and administrators in the use of technology to improve the methodology of instruction.

6. Conduct experimentation and evaluation of media programs and projects.

7. Develop media budget; monitor its expenditure.

8. Determine staff requirements and participate in the selection, training and supervision of paraprofessional, professional, clerical, and technical personnel.

9. Plan for space and facilities required to house audiovisual, library, television, and other media services.

10. Provide optimum physical conditions for utilization of media in the planning of new buildings and the remodeling of old.

11. Keep school administrator and supervisory staff informed of new technological developments related to teaching and instructional communication.

12. Maintain liaison with other supervisory staff, with state and national media personnel, and with professional associations.

13. Participate in planning and assist in coordinating the linking of communications functions with the school system to external communication systems at the state, regional and international (satellite) levels.

MEDIA PROFESSIONALS FUNCTIONING AT STATE AND FEDERAL LEVELS:

1. Gather information regarding the status and trends in development of instructional communications and technology, and media programs in schools, in order to make recommendations for the guidance of instructional program planners, legislators, and others concerned with the long-range development of educational resources.

2. Plan and instigate studies, and obtain support from public and private agencies, for experimental and developmental projects pertaining to educational media and their wider and/or more effective applications in teaching and learning.

3. Gather and disseminate information relating to procedures for initiating, planning and evaluating media programs; research findings.

4. Consult with intermediate, county and local school units and institutions of higher education with regard to plans for improving and extending the uses of instructional technology.

5. Promote appropriate training activities for teachers in the use of instructional media, development of materials, and instructional planning as related to modern technology.

6. Work with other state and national personnel in related areas, such as curriculum and supervision, to improve the planning of instructional systems and the utilization of instructional media.

7. Organize state and national media resources to complement those available at the local level.

8. Plan and coordinate the linking of communications functions among schools and colleges, and develop communication systems at the state, regional, national, and international levels.

9. Work with teacher education institutions and appropriate professional organizations to establish standards for certification of educational media personnel.

10. Work with appropriate professional groups to establish standards that will assist schools and colleges in developing and evaluating media programs, and in selecting new media equipment and materials.

MEDIA PROFESSIONALS IN COLLEGES AND UNIVERSITIES:

1. Coordinate and administer media services involving films, filmstrips, large and small transparencies, recordings, programed materials and teaching machines, student response systems, language laboratories, dial access information storage and retrieval systems, computer-assisted instruction and television systems -- also printed materials in the case of totally integrated media programs.

2. Assist the instructional staff in designing and producing materials required to meet specific local instructional needs.

3. Participate in the design of instructional systems, particularly with respect to the optimum fitting of appropriate technology in the attainment of educational goals and supervise the necessary technical support services.

4. Conduct in-service education activities and disseminate information to faculty regarding instructional media, new developments, techniques, and research findings.

5. Collaborate in the development of in-service training programs in elementary and secondary schools which seek to improve the selection and use of instructional materials and technology.

6. Participate in teacher education programs designed to acquaint teachers with various media and their use in teaching.

7. Offer leadership for, and participate in, professional education of media specialists and generalists for various administrative, research and instructional functions related to instructional communications and technology.

8. Participate in the planning and design of new building and instructional facilities to accomodate the optimum use of various educational media.

9. Conduct basic and applied research in instructional communications, including particularly theoretical considerations of the properties and functions of iconic signs and symbols in learning.

Preparation Required

The individual preparing for a professional career in educational media has the choice of specializing in such fields as "audiovisual," "library science," "broadcasting," or moving toward a more comprehensive approach to the broad area of instructional communications and technology. While it seems reasonable to anticipate an increasing demand for both professionals with intensive specializations and those who may be required to deal with more highly integrated programs, it may be that technological trends will tend to reduce or eliminate some of the separations we have known in the past, and thus move toward patterns of graduate training with an increasing number of common elements for all who intend to work in the field of instructional communications and technology. Generally, those performing the functions listed above will require graduate study including at least the following elements in addition to their general education and basic professional training:

1. Utilization and evaluation of educational media and materials.

2. Design and production of various types of instructional materials.

3. Organization of media collections.

4. Administration and supervision of media programs.

5. Applications of various types of technologies to instruction.

6. Communication, learning and perception theories as related to media and the utilization of instructional materials in education.

7. Curriculum development and recent instructional trends at the preschool, elementary, secondary, college, and/or adult levels.

8. Development of supervisory and in-service education activities.

In addition to the general preparation areas identified above, many specialists will be required who will pursue further study in one or more of the following fields:

- .Advanced elements of librarianship
- .Information science
- .Advanced elements of educational broadcasting
- .Programed instruction
- .Instructional systems
- .Computer-assisted instruction
- .Behavioral research

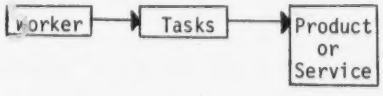
# THE MEDIA SPECIALIST:
# A TASK APPROACH TO CERTIFICATION

C. James Wallington
1972

Generally speaking, the rationale behind licensing or certifying an individual to perform certain tasks is to guarantee that those tasks will always be performed according to designated procedures to meet specific minimum standards.

Consider a licensed physician. While circumstances may not always allow him to save a patient's life, he will -- according to the rationale of licensing -- be able to perform certain tasks which are known to be beneficial to the patient. Underlying this rationale is the assumption that if a person can perform a task correctly and the task given always produces something of known value, then the certification will indirectly ensure that a product (or service) will meet set standards. Let us look at the process in flowchart fashion:

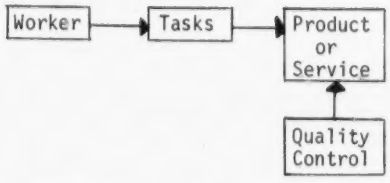
Figure 1.




There are a number of places where quality control can be introduced. One place is at the end of the process. Evaluation of the final result -- either a product or a service -- is done after the task is completed and the result exists. (See Figure 2.)

Quality control is now after the fact. This works reasonably well in circumstances where the product can be discarded or reworked to meet the standards. It is impractical in situations where the final result must be retained and used or where it is difficult to examine each product.

Figure 2.




An assembly line is an example of a situation in which quality control through inspection is practiced.

If quality control cannot be introduced after the fact, it is often moved back one step in the process:

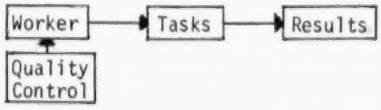
Figure 3.

The concept here is that if the worker conforms to set procedures while he/she performs the task, then the product will meet the standards. This is a common pattern in teacher evaluation. The evaluator observes the teacher during one or more (sometimes less) class periods as he/she instructs students.

This form of quality control -- through task inspection -- is quite common in all fields. In most cases, after initial full-time observations, only routine spot checks are held unless the defective products indicate a need to re-examine the

worker at her/his task. Some conditions -- e.g., geography, time, availability of inspectors -- make quality control at the task level implausible. In such cases, quality control is then moved another step away from the result:

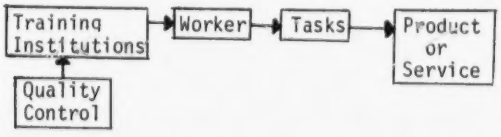
Figure 4.




The examination process is related directly to the worker and in most cases through a pre-practice examination, not an on-the-job evaluation. Most licenses are good for life or are easily renewable. Few are revoked. We return now to the example of the licensed physician given earlier who is not certified through a daily examination of her/his products, nor a direct examination of her/his performance of tasks, but on a pre-career examination of her/his skills.

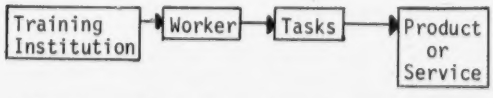
In some cases quality control -- through licensing -- may be one more step removed from the result. Some licensing agencies automatically grant a license or certificate to whoever has been endorsed by an approved training institution. (See Figure 5.) This is a common occurrence in the field of education, especially teacher certification. Unfortunately, this means that certification can be granted on classroom performance alone. Happily, almost all states do require some sort of apprenticeship or practice teaching as well as classroom work.

Figure 5.




Few locations require an examination for media certification and most do not require apprenticeship. If a special certificate in educational media is required to practice, completion of a list of courses will usually suffice for the granting of the certificate. It is further interesting to note that the majority of course requirements are listed by title and not by objective, content or expected behaviors. To examine the problem this may cause, we must look again at the diagrams. To review the relationship of training to product, see Figure 6.

Figure 6.




Direct quality control of the product (Figure 2) gives instant information about product acceptability. Modifications in the process can be quickly made to improve the product.

When quality control is moved to "task" level (Figure 3), it is sometimes combined with direct product examination (Figure 2) so a twofold inspection occurs. More often, however, the examination of the final product is reduced as quality control at the task level increases. The resulting feedback concerning the final product is lessened. Changes in the process occur more slowly. When quality control is moved yet another step away from the final product to the worker (Figure 4), the feedback, except for the gross errors, is weak indeed. For example, consider the qualitative differences between the 70-year-old driver licensed at age 16 and never re-examined and the 20-year-old driver licensed at age 16. The licensing of drivers and the end product -- safe trips -- are often widely separated.

Little need be said about the vast gap between applying quality control at the training institution and the quality of the final product or service. This gulf exists between teacher education courses and the actual classroom practices. This is a serious problem in schools today. As pointed out in The Way Teaching Is: A Report of the Seminar on Teaching (ASCD, 1966), the two are sometimes unrelated.

We return now to the previous observation that the specifications for quality control in training institutions are stated in generalities such as course titles or areas of study while the specifications at task and product level are often specific descriptions of behaviors or actions. There is a current trend to at least make the quality control specifications at different levels -- task, worker and training institution -- compatible by stating them in common terms and statements. The current emphasis on accountability, both for the educator and her/his program, is gradually leading toward a certification based upon actual performance. Jobs are being described in terms of tasks or skills needed instead of degrees required and courses taken.

In the media field, a similar movement is taking place. Two AECT regional leadership conferences have made performance-based certification their topic. After one conference, personnel in the state department of education were apprised of the results and the state media association actively worked to get the requirements adopted.

The whole concept of performance-based certification is closely allied to the concept of new careers, career ladders, and job restructuring. One of the first steps in performance-based job descriptions is to develop a task list or data bank of various behaviors expected of the job holder. From this data, tasks can be clustered in any number of ways to make jobs.

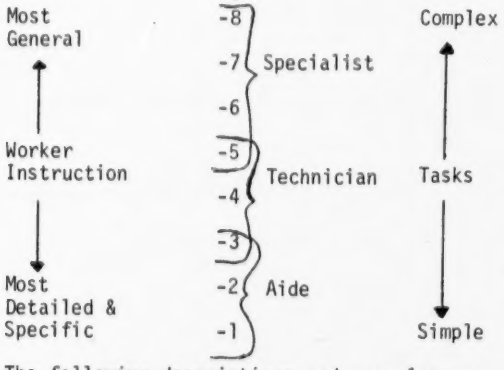
There are any number of ways of developing such a task list and they range from pure speculation to actual on-the-job task observation and analysis. The task listing that follows is derived from the final report of the Jobs in Instructional Media Study (JIMS). In the study, a series of over 125 job analyses were conducted. This yielded over 2,000 discreet task statements ranging from very simple to extremely complex. These were weeded and refined and data from other projects was incorporated.

The tasks were analyzed and coded according to a number of Functional Job Analysis scales, one of which was a scale of Worker Instructions. The

Worker Instruction scale measures the amount of instruction needed by the worker to complete the task. Thus, very low-level tasks (Worker Instruction Level 1) have "inputs, outputs, tools, equipment, and procedures all specified. Almost everything the worker needs to know is contained in her/his assignment. He/she is required to turn out a specified amount of work or a standard number of units per hour or day." The highest level task (Worker Instruction Level 8) has "information and/or direction comes to the worker in terms of needs (tactical, organizational, strategic, financial). He/she coordinates both organizational and technical data in order to make decisions and determinations regarding courses of action (outputs), for major sections (divisions, groups), of her/his organization."

The advantage of the Worker Instruction scale is that it permits tasks to be classified according to complexity and responsibility. The tasks observed were grouped into three basic clusters -- beginning, middle and advanced. These were also described as the aide level, the technician level, and the specialist level:

Figure 7.




The following descriptions and examples are adapted from Audiovisual Instruction and should serve to clarify the groupings:

"Aides: have specific instructions about the tasks they perform. The task may be only part of a process, the parts of which the aide cannot or does not control (e.g., drying photographic prints, but not necessarily enlarging or developing them). Aides can be trained for a task in a relatively short period of time, since almost everything they need to know is contained in the task. Aides are not required to solve problems external to the task. If something happens which is not covered by the instructions, the aide asks for help and cannot be held responsible for solving the problem.

"Technicians: have instructions which deal more with a cluster of tasks leading to a specified output. The technician may have a choice of routines to reach a given output. He/she has a broken view of the situation and is expected generalize more from task to task than the aide. The technician is responsible for the product as long as all of the routines necessary to reach the output have been specified and made available to her/him. The example (again photographic) is that the technician may be told to produce six 8"X10" prints from a given negative, as well as to take the pictures and develop them.

"Specialists: do not have as many routines and tasks specified. They become saddled with the general problem and then try to determine what the product would be in the first place and then how best to go about it. Having defined the goals, they are often forced to develop the routines or tasks necessary to implement the goals. They deal with a broad process approach. Following the previous examples, the specialist would most likely receive instructions such as 'Gail, this is the superintendent. I think we should do some publicity for the PTA and the Board on that math project. Take care of it, will you?' Perhaps the solution may require some 8"X10" photographs, perhaps not. The task assignment does not specify."

The task listing that follows is for the specialist, or advanced level. The tasks were first grouped by basic function in the Domain of Instructional Technology.[1] Within each function, specific tasks are clustered under a goal or purpose. For example: Item 1.01 is "To set goals/policy of training center." The first task statement under 1.01 is "designs organizational rationale to improve organization." The goal or purpose in each case may be added to the task statement, thus the complete task statement for 1.01.01 is "Designs organizational rationale to improve organization to set goals/policy of training center."

Some caveats should be expressed at this point. First, the field of educational technology lacks a standardized terminology, especially for action verbs. This means that the terms used in the task listing may suggest different meanings to different readers. There will undoubtedly be individuals who read a task and think "That is not a specialist level task. It is much too easy." When reading the list one must keep in mind that the tasks were grouped not by the terms but by Worker Instruction codes, which are not included here. This lack of standardized terminology may also mean that some words may have meaning shifts. Efforts have been made to eliminate any such occurrences, but the list undoubtedly has some.

Second, the task list was taken from a computer print-out. The data-processing restrictions in the study required that each statement be no longer than 55 characters including some codes. Quite often a detailed task description involving some 300 to 400 words was brutally condensed into the requisite 55 characters. Since the emphasis was on the codes from the analysis and not with the specifics of the task statement, such treatment did serve the project needs. An effort has also been

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[1]The functions are 1. organization management; 2. personnel management; 3. research and theory; 4. design; 5. production; 6. evaluation/selection; 7. support/supply; 8. utilization; 9. utilization/dissemination. These functions can be directly related to the recent definition of educational technology developed by the AECT committee on Definition and Terminology. It will be found in the October 1972 issue of Audiovisual Instruction. A popular article by Dr. Kenneth Silber describing the "Domain of Instructional Technology" appeared in the May 1970 issue of Audiovisual Instruction.

made to eliminate abbreviations but some of the familiar ones in the field such as CAI (computer-assisted instruction) and PI (Programed Instruction) still crop up. A list of more commonly used abbreviations accompanies the listing.

Third, this listing is based on observations and the sample will NOT include the complete spectrum of tasks for specialists in the Domain of Instructional Technology. The list needs far more tasks to approach any level of comprehensiveness. Also, tasks are NOT necessarily in the order in which they would be performed to reach an overall goal. Any ordering, sorting or expanding of tasks is left to the reader. Keep in mind, too, that the task statements are fairly general since the worker instructions received by the specialist are also fairly general.

Finally, the appearance of these statements here does not constitute any endorsement by AECT or any other organization. Further information about the Jobs in Instructional Media Study is available through ERIC.

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Silber, Kenneth H. "What Field Are We In, Anyhow?", Audiovisual Instruction, Vol. 15, No. 5, May 1970, pp. 21 - 24.

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ABBREVIATIONS USED IN TASK LIST FOR SPECIALISTS:

IMC - Instructional Media Center
PERT - Program Evaluation and Review Technique
AV - Audiovisual
CAI - Computer-Assisted Instruction
ITV - Instructional Television
VTR - Videotape Recorder
Edex - multi-media display and response system
II - Individualized Instruction
CCTV - Closed-Circuit Television

From Hyer et al., 1971.

# Task List for Specialists

ORGANIZATION MANAGEMENT FUNCTION

To set goals/policy of training center

- Designs organizational rationale to improve organization
- Writes supporting paper to describe organizational rationale
- Serves on committee to improve organization
- Conducts staff meetings to work on long-range goals
- Designs long-range goals to anticipate future growth
- Designs conference to inform management of changes
- Conducts briefing to inform management of changes
- Develops conceptual model to design basic instructor course
- Develops conceptual models to communicate complex concepts
- Works with staff on projects to improve communication flow between staff

To organize/reorganize organization structure to meet goals

- Reads organization charter to identify organization goals
- Translates organization goals to identify broad objectives
- Confers with colleagues to evaluate broad objectives
- Writes paper to identify new broad objectives
- Translates objectives to formulate organization functions
- Confers with colleagues to evaluate appropriateness of functions
- Analyzes relations between functions to develop functional matrix
- Confers with colleagues to evaluate inclusiveness of matrix
- Writes paper to revise functional matrix
- Translates functional matrix to identify needed structures
- Analyzes current structures to compare with needed structures
- Analyzes current structures to determine weaknesses
- Formulates organizational strategies to overcome weaknesses
- Translates strategies to define new structures/operations
- Analyzes new structures/operations to evaluate facilitation of functions
- Translates new structures/operations to formulate new structure matrix
- Analyzes budget to determine structure constraints
- Analyzes facilities to determine structure constraints
- Analyzes staff interests to determine structure constraints
- Rewrites matrix to include structure constraints
- Compares structure & function matrices to evaluate structure matrix
- Confers with colleagues to evaluate structure matrix
- Writes paper to revise structure matrix
- Reads matrix to define relations between dimensions
- Analyzes relations and functions to define duties of personnel
- Analyzes relations and functions to define interaction of personnel
- Analyzes relations and functions to define lines of communication
- Writes paper to explain new structure
- Confers with colleagues to evaluate new structure
- Listens to feedback to revise structure
- Rewrites paper to revise structure
- Writes job descriptions to fill key positions in structure

To plan IMC operations for coming year

- Analyzes service requests to identify service needs
- Confers with departments to clarify service needs
- Writes memo to departments to clarify service needs
- Analyzes service needs to propose new service operation
- Confers with departments to propose new service operation

To coordinate facilities planning

- Analyzes work of organization to identify how facilities can help
- Analyzes staff communications and interaction to identify how facilities can help
- Synthesizes factors to develop facilities use plan
- Negotiates with college planners to obtain space on campus
- Analyzes on-campus space obtained to ascertain need for additional space
- Speaks to realtors to seek additional space off campus
- Examines facilities/money ratio to select best facilities
- Analyzes on/off-campus space to ascertain need for additional space
- Translates need for additional space to consider building own facilities
- Writes notice to publicize decision to build
- Confers with architect consultant to evaluate architect's ideas
- Selects three architect consultants to discuss facilities in department
- Confers with architect consultants to explain facilities needs

Confers with architect consultants to evaluate proposed designs
Selects best general plan to hire architect
Explains work of organization to give architect design specifications
Explains how facilities aid work to give architect design specifications
Explains communication & interaction needs of staff to give architect design specifications
Explains special needs of staff to give architect design specifications
Explains financial constraints to give architect design specifications
Persuades architect to meet staff to ensure staff input
Reads architect's plans to evaluate proposed facility design
Compares plans and needs to evaluate proposed facility design
Discusses plans with architect to suggest revisions in plans
Reads revised plans to re-evaluate proposed design
Compares revised plans and needs to re-evaluate proposed design
Reads final plans to approve proposed facility design
Reads architect budget to ascertain proposed cost
Negotiates with architect to obtain lower cost
Negotiates with chancellor to obtain approval for facilities
Analyzes organization activities to ascertain equipment needs
Listens to staff to ascertain equipment needs
Compares equipment on hand & needs to identify equipment to be bought
Reads equipment order to approve for purchase

To plan programs/projects

Reads project reports to identify current work
Discusses projects & fiscal resources to identify future priorities
Confers with staff to identify project interests
Confers with colleagues to become involved in new ventures
Compares interests with organizational policy to ensure compatibility
Reads newsletters, fiscal statements to identify possible financial sources
Reads budget to identify financial internal support
Synthesizes discussions to propose department programs/projects
Writes paper to present department programs/projects
Confers with staff to evaluate programs/projects paper
Identifies constraints on programs to decide on program feasibility
Selects programs/projects for department to plan work for year

To initiate federally funded project

Reads assigned outline to clarify general idea of project
Asks questions to clarify general idea of project
Reads previous proposals to obtain background information
Analyzes proposal guidelines to write text of proposal
Writes draft proposal to request federal funds
Rewrites proposal to align with university interest
Analyzes staff needs to determine staff salary needs
Analyzes pay schedules to compute staff budget
Identifies appropriate staff to staff proposed program
Assesses equipment needs to compute equipment budget
Assesses materials needs to compute materials budget
Transmits proposal to administration to approve for submission
Discusses with federal personnel to negotiate details of changes
Writes brochure to describe proposed program

To formulate policy for procedure & equipment changes in center

Analyzes budget commitment to determine cost constraints
Analyzes program commitment to determine program constraints
Analyzes usage projections to determine audiovisual service needs
Analyzes past performance to determine revisions needed
Weighs all constraints to formulate plan
Recommends procedure changes to meet new policy
Recommends equipment changes to meet new policy

To monitor & change operation of center

Discusses with course writers to increase course illustrations
Reads work plans to inform of work in progress
Identifies area of work to anticipate developments
Conceptualizes plans to anticipate developments
Researches electronic illustrating to coordinate production unit
Designs long-range plans to coordinate production unit
Proposes information gathering to provide models for management
Confers with technical experts to design new organizational model
Designs new organizational model to improve organization
Persuades management to hire additional personnel
Drives to local training institutions to observe new hardware systems
Evaluates new equipment to assess compatibility
Persuades management to purchase new hardware
Evaluates organizational structure to determine need for new model

To improve communications in center

Designs publications format to standardize publications
Proposes new documentation to improve research library
Develops new procedures to route information

To administer training center

Assesses expenditures to write financial plan
Justifies expenditures to acquire funds for operation
Assesses cost benefits of training to inform management
Write memo to management to acquire funds for operation
Negotiates with management to acquire funds for operation
Negotiates with management to institute open purchase account
Confers with staff about problems to resolve organizational problems
Asks questions of staff to resolve organizational problems
Makes decisions on action to resolve organizational problems
Assesses draft training materials to make production decision
Conducts staff meetings to transmit information to staff

To administer/direct project

Conceptualizes idea for project to meet program goals
Rereads contract to define desired outcomes
Analyzes goals of project to define needed activities/products
Speaks to technical workers to ascertain jobs to be done
Speaks to technical workers to ascertain amount of time needed
Speaks to technical workers to ascertain workers needed
Assesses cost restraints to determine limits of project
Writes tentative work plan to design project
Assigns staff to project to meet goals
Analyzes relations of activities to develop PERT schedule
Analyzes time for each activity to develop PERT schedule
Analyzes project limits to develop PERT schedule
Assigns completion dates to design project deadlines
Speaks to technical workers to explain PERT chart
Speaks to technical workers to review progress periodically
Observes staff work/products to evaluate work performed
Listens to outside input to improve product
Reviews work in progress to keep self informed
Confers with staff to solve problems regarding product
Compares products/activities with goals to evaluate project performance
Analyzes problems in project to plan changes in project direction
Makes decision to terminate project to minimize wasted effort
Reviews project progress to present report to management/customer
Translates technical language to describe project to management/customer
Speaks to management/customer to present project progress
Writes report on project to present progress to management/customer
Compares products/activities with goals to assure quality of work
Compares products/activities with goals to suggest improvements
Writes final report on project to disseminate findings
Edits report on project to ensure accuracy

To administer training course

Evaluates teaching to assess work of teaching personnel
Confers with teaching personnel to evaluate success of course

To develop model for economic analysis of training

Researches approaches to identify most appropriate approach
Analyzes cost factors in training to develop list of training costs
Compares employee worth to cost to compute ratio of training costs
Designs system to determine value of training
Estimates changes in training to improve value of training

To design financial structure

Reads history of organization to identify organization needs
Reads board requirements and policy to identify organization needs
Reads federal project requirements to identify organization needs
Reads bookkeeping department procedures to identify organization needs
Analyzes how to get financial information to identify organization needs
Analyzes decisions based on finances to identify organization needs
Analyzes needed controls on finances to identify organization needs
Synthesizes several need factors to define structural parameters of organization
Confers with auditor to identify state regulations
Confers with auditor to identify feasible structures
Confers with auditor to identify acceptable structures
Analyzes acceptable structures to match with parameters
Compares structure/parameter matches to select financial structure

To estimate audiovisual center budget

Analyzes past performance to determine revisions needed
Analyzes center inventories to list staff, equipment & materials
Analyzes program projections to determine additions needed
Lists staff time & rates to determine staff budget

Lists equipment needs and costs to determine equipment budget
Lists materials needs and costs to determine materials budget

To prepare annual budget

Reads state legal requirements to identify budgeting calendar
Writes memo to subordinates to require budget submissions
Analyzes budget submissions to identify operational requirements
Analyzes budget submissions to identify new programs
Compares past & present budgets to approve/disapprove budget
Compares budget & past performance to approve/disapprove budget
Compiles sub-budgets to develop budget draft
Confers with advisory committee to evaluate program improvements
Incorporates improvement in budget to develop final budget
Discusses budget with superintendent to have budget evaluated

To supervise cooperative purchasing

Meets with district purchasing agents to determine changes in policy
Supervises analysis of incoming forms to compile county totals
Reads maintenance reports to select brands of AV equipment
Reads new product reports to select brands of AV equipment
Compares different brands to select brands of AV equipment
Writes bid forms for contractors to obtain bids on equipment
Supervises sending of bid forms to obtain bids on equipment
Compares bids to select equipment/materials vendors
Lays out samples to select equipment/materials vendors
Compares samples to select equipment/materials vendors
Analyzes product/cost relationship to select equipment/materials vendors
Makes recommendation to committee to select equipment/materials vendors
Writes report to board of education to indicate vendor selections
Supervises personnel to receive equipment/materials
Supervises personnel to store equipment/materials
Supervises personnel to redistribute equipment/materials
Supervises secretary to bill districts
Supervises bookkeeper to credit district accounts

To purchase audiovisual materials

Confers with principals to determine needs
Assesses requests for new equipment/materials to determine purchase priority
Notifies manufacturers to cancel late orders

PERSONNEL MANAGEMENT FUNCTION

To staff projects

Analyzes goals of project to define activities to be done
Analyzes budget to determine resources available
Translates project activities to develop job descriptions
Estimates staff needs to fill described jobs
Reads resumes to select applicants for interview
Selects list of applicants to do initial interviewing
Describes project & company to initiate job interview
Questions applicant to ascertain qualifications
Evaluates applicants to make staff selection

To staff training center

Identifies area of work to define staff need
Analyzes budget to determine resources available
Writes memos to describe need for new position
Writes position description to get job classification
Writes position description to advertise vacancy
Reviews application forms to select applicants for interview
Interviews job applicants to select most suitable
Persuades personnel department to speed application process

To conduct training of new staff on general office procedures

Analyzes office procedures information to determine goals of training
Writes paper to set up goals of training
Writes procedural manual to inform new employees
Draws rough sketches to design visuals for training
Supervises production staff to arrange for production of visuals
Evaluates orientation session to determine success

To set up on-the-job training seminars

Analyzes unit request to determine need for training
Writes position paper to set goals of training
Confers with unit head to determine accuracy of goals
Evaluates recommendations to determine best trainer
Evaluates applications to determine trainees
Evaluates training session to determine progress/relevance

To improve communications between technicians and artists

Analyzes subject matter & problems to encourage seminar discussion
Designs art kit to demonstrate technical details
Conducts seminar to encourage discussion

To supervise personnel in training center

Discusses with new staff to develop performance criteria

Discusses with staff to evaluate work performed
Evaluates employee performance to assess employee progress
Evaluates employee performance to write evaluation report
Writes recommendations to suggest promotions & awards
Negotiates with personnel department to suggest promotions & awards
Confers with staff to revise work plans
Assesses work to be performed to approve requests for leave
Conducts staff meetings to explain administrative directives

To supervise graphics unit

Reviews job applications to make recommendations
Assesses staff work to write performance reports
Writes performance reports to inform supervisor
Discusses work load with staff to determine assignments
Assigns work to staff to meet goals of unit
Supervises staff to ensure work is completed
Confers with staff to explain administrative regulations

To supervise student workers

Confers with staff to determine work assignments
Confers with students to assign work areas
Evaluates student performance to write evaluation report

To fire personnel

Reviews worker evaluation reports to determine acceptability of work
Confers with supervisor to determine validity of reports
Confers with worker to determine validity of reports
Confers with peers to determine validity of reports
Makes decision to fire or not

RESEARCH-THEORY FUNCTION

To conceptualize theoretical models

Perceives problem in field to identify general research problem
Analyzes general problem to identify specific problem areas
Selects problem areas to limit specific problem
Analyzes problem areas to define specific problem
Combines specific problem factors to make concise problem definition
Translates problem statement to identify solution parameters
Reads problem/solution parameters to brainstorm solutions
Discusses problem with colleagues to brainstorm solutions
Combines ideas to generate new ideas
Translates ideas to other forms to generate new ideas
Seeks out research information to support/negate alternative ideas
Seeks out research information to generate new ideas
Compares solutions/information to evaluate proposed solutions
Compares solutions/information to generate new solutions
Synthesizes proposed solutions to converge on tentative model
Discusses model with colleagues to test reality of model
Compares model with known data to test reality of model
Analyzes reality test results to revise model
Writes paper to describe model

To conduct research project

Identifies general problem to provide basis for research study
Reads journals to identify appropriate funding sources
Contacts colleagues to identify appropriate funding sources
Writes proposal to obtain funds for research study
Formulates specific hypotheses to conduct research study
Designs research methodology to test hypotheses
Reads proposal to identify project objectives
Analyzes objectives to define project activities
Analyzes activities to determine time for each activity
Negotiates with funding source to clarify details of proposal
Reads resumes of current staff to identify possible project staff
Speaks to current staff to identify possible project staff
Compares capabilities with needs to select project staff
Matches staff to activities to identify gaps in staff
Reads resumes of prospective staff members to attempt to fill staff gaps
Interviews prospective staff members to evaluate qualifications
Compares applicants to select staff
Hires personnel to staff research project
Explains project to staff to train staff
Explains tasks to be done to train staff
Develops statistical treatment to create experimental conditions
Develops instruments to measure effects of treatments
Administers treatment/instrument to collect data
Analyzes data to measure effects of treatments
Supervises personnel to ensure correct data collection
Supervises personnel to ensure correct data collation
Supervises personnel to ensure correct data analysis
Interprets data to evaluate validity of hypothesis
Listens to staff to solve project problems
States alternative solutions to solve project problems
Selects best solution to solve project problems
Writes progress reports to inform monitor of progress
Reads progress reports to evaluate project progress
Writes final report to disseminate research findings
Writes articles to disseminate research findings
Designs presentations to disseminate research findings

To analyze research data

Reads research proposal to understand type of data collected

Reads research proposal to understand study objectives
Translates objectives to define categories of responses
Reads data to determine if categories fit
Classifies each response to put responses into categories
Analyzes objectives/data type to select statistical formula
Reads formula to define computation sequence
Translates data into formula to perform statistical analysis
Examines objectives/data analysis to interpret meaning of data
Writes paper to explain outcome of study

To improve standards of research projects

Defines basic/applied research to design guidelines for research
Designs standard test formats to design guidelines for research
Specifies resources available to design guidelines for research
Designs systematic procedures to design guidelines for research
Advises researchers to inform on psychological principles

To do research regarding learning strategies for computer-assisted instruction (CAI)

Reads research literature to select relevant learning theories
Selects experimental CAI materials to run learning strategy experiments
Reads CAI materials to identify computer activity
Speaks to students to arrange for lesson simulation
Asks questions from CAI lesson to try out lesson
Analyzes mistakes to identify need for tutorial help
Formulates strategy to help student to correct mistakes
Confers with students to try out tutorial strategy
Analyzes student responses to determine success of strategy
Speaks to student to end lesson simulation
Listens to tapes of student sessions to summarize tutorial strategies
Analyzes tutorial strategies to identify common elements
Analyzes tutorial strategies to identify successful elements
Analyzes common/successful elements to derive general rules
Analyzes research literature on tutorial behavior to derive specifications for CAI tutorial system
Translates tutorial system specifications to develop decision model
Translates decision model to develop programming flow chart
Speaks to students to arrange for lesson simulation
Observes students interact with lesson to try out lesson
Observes effect of tutorial strategies to try out lesson
Analyzes student errors to evaluate lesson/tutorial strategies

To perform research on effectiveness of instructional television (ITV)

Analyzes current instructional pattern to identify ways of improving
Lists new instructional patterns to identify ways of improving
Analyzes characteristics of ITV to identify parameters
Writes research plan to test effectiveness of ITV
Defines objectives to design research project
Discusses with content specialist to adapt course to TV script
Analyzes existing lesson to set objectives
Analyzes existing test to design post-test
Analyzes script to design visuals for TV
Confers with artist to clarify visuals needed
Directs talent and crew to direct VTR production
Analyzes test results to compute effectiveness of TV
Writes report to disseminate findings

To conduct research on effective training techniques

Designs research methodology to organize procedures of project
Discusses with school district to implement experimental approach
Translates theoretical model to develop teacher behavior scale
Observes teacher behavior to code according to scale
Codes teacher behavior to categorize according to scale
Performs statistical analysis on data to quantify teacher behavior
Compares observed behavior to model to identify teacher behavior problems
Designs alternate training strategies to teach new teacher behaviors
Supervises training conferences to teach new teacher behaviors
Observes teacher behavior to determine training effectiveness
Analyzes theoretical model to determine appropriate student behavior
Observes student behavior to code according to scale
Codes student behavior to determine teaching effectiveness
Translates theoretical model to develop attitude scale
Performs statistical analysis to measure teacher attitude
Performs statistical analysis to analyze data
Interprets analyzed data to identify most effective technique

To perform feasibility study on new equipment

Analyzes idea for new equipment to develop method for feasibility study
Develops methodology to design feasibility study
Writes general specifications to design prototype equipment
Confers with engineers to determine technical specifications

Draws concrete plans to design prototype equipment
Demonstrates operation of prototype to get feedback on performance
Revises design plans to improve prototype
Assesses potential market to develop product cost data
Calculates materials/labor costs to develop product cost data
Identifies similar products to determine competition
Compares unit product cost to determine product competitiveness
Analyzes market/cost/competition to make recommendation
Writes report to disseminate results of study

To conduct survey of media usage

Analyzes survey objectives to compile usage questions
Analyzes survey objectives to compile response categories
Supervises collection & tabulation of data to prepare summary

DESIGN FUNCTION

To design instructional materials for course

Confers with instructors to define training problem
Describes critical incidents to define training problem
Specifies tasks to identify terminal behavior
Defines objectives for course to identify terminal behavior
Writes overall design for course to organize content
Prescribes content area of course to organize content
Defines entry behavior of students to determine content
Writes technical draft to define training problem
Confers with instructors to identify teaching strategy
Rewrites technical draft to improve training program
Designs pre- and post-tests to evaluate effectiveness of program
Evaluates extant materials to identify suitable content
Selects appropriate materials and media to organize course
Designs role playing to meet training need
Teaches course to evaluate effectiveness of materials

To design programed instruction materials

Confers with client to define problem area
Questions client to delimit problem area
Reads client's current materials to research problem area
Analyzes subject matter to identify segments for programing
Confers with client to define target population
Analyzes potential audience to state assumptions about learners
Confers with client to define general objectives
Analyzes subject matter to state broad objectives
Performs task analysis to organize content
Restates task analysis to design flow chart
Analyzes flow chart to write behavioral objectives
Confers with client to refine behavioral objectives
Confers with client to identify essential objectives
Listens in meetings to understand political aspects
Confers with content experts to understand content
Confers with client to reconcile conflicts in data
Confers with client to revise behavioral objectives
Analyzes objectives/flow chart to write content outline
Writes brief draft of program to organize content
Analyzes content outline to select appropriate media
Analyzes content outline to select model/paradigm
Reviews content to sequence presentation
Analyzes content to determine units & frames
Translates objectives/content to write program frames
Revises draft of program to reduce step size
Analyzes objectives to write pre- and post-tests
Locates technical information to design visual chart
Analyzes technical information to design visual chart
Evaluates pilot performance to evaluate program effectiveness
Revises program to improve quality

To design materials for instructor training course

Analyzes task list to group in logical clusters
Analyzes task groups to expand into objectives
Writes behavioral objectives to organize unit content
Analyzes behavioral objectives to select method of instruction
Designs content of unit to fulfill components of objectives
Writes instructor activities to clarify & expand course content
Decides on visuals to illustrate content
Writes summary of lesson to clarify lesson content
Teaches pilot lesson to time length
Writes supplementary handbook to assist in teaching course
Designs evaluation sheets to elicit student reaction to materials
Teaches pilot test to evaluate effectiveness of materials
Analyzes evaluation sheets to assess student reaction
Revises instructional materials to improve quality

To coordinate design of instructor training course

Confers with director to outline course design
Plans conferences to develop task list
Confers with course writers to develop behavioral objectives
Writes operations plan to organize course development
Estimates time factors to organize course development
Critiques draft course materials to improve quality
Writes memos to field personnel to inform on progress of course
Conducts briefings to inform on progress of course
Writes report to management to inform on progress of course
Designs evaluation forms to evaluate effectiveness of course

To write unit for instructor course

Analyzes learning modes to list characteristics

Assigns modes to objectives to provide model for instruction
Analyzes lesson plan construction to list characteristics
Designs sample lesson plans to provide model for instruction
Analyzes test construction to list characteristics
Designs sample tests to provide models for instruction

To write instructors' guide for instructional materials

Analyzes objectives to restate more fully
Assesses time spent in pilot test to indicate time needed for materials
Analyzes content and time to write schedule
Analyzes unprogrammed segments to write lesson plans
Analyzes objectives to write pre-test
Analyzes objectives to write practice exercises
Analyzes objectives to write role playing

To coordinate design of EDEX materials

Identifies field personnel to select program developers
Evaluates written program to suggest improvements
Asks clarifying questions to suggest improvements
Analyzes step size to evaluate written program
Suggests revisions to improve written program
Examines draft visuals to assess correlation with script
Analyzes program to assess logical development
Chooses audience to test out prototype program
Evaluates results from test to test out prototype program

To develop instructional packages for individualized instruction (II)

Negotiates contract with customer to initiate project development
Instructs customer in II to define problems in process
Instructs customer in II to define changed concepts of instruction
Instructs customer in II to define effects on curriculum
Instructs customer in II to define new role of testing
Confers with client to determine client roles
Confers with client to determine company roles
Instructs customer in logistics to define work/money/time relationships
Questions client to define wants/needs & their relationships
Consults with client to feed back goals for project
Analyzes instructional setting to define learning environment
Analyzes project goals to define criterion performance
Translates criterion performance to define learning objectives
Analyzes current content to decide if teaches to objectives
Analyzes current content to determine procedures learner must follow
Analyzes current content to define alternative procedures
Synthesizes objectives/content to define needed new content
Extrapolates from content/objectives to define teaching strategies
Translates teaching strategies to make media selections
Reads final script to edit content/sequence/ambiguity
Writes introduction to materials to describe materials utilization
Plays role of student to field test materials
Shows materials to client to obtain review & comments
Translates suggestions to make revisions in materials

To design multi-media presentations

Looks at organization projects to find production opportunity
Identifies projects related to idea to find production opportunity
Identifies amenable project directors to find production opportunity
Speaks to project directors to persuade to produce presentation
Confers with project director to ascertain audience/objective
Examines meaning of idea to clarify presentation subject
Consider philosophy behind idea to clarify presentation subject
Consider ways of presenting to clarify presentation subject
Consider media involved to clarify presentation subject
Analyzes presentation subject to write general objectives
Breaks down general objectives to define behavioral objectives
Conceives ways of meeting objectives to develop treatment
Translates objectives/treatment to determine sequence
Translates objectives/treatment to determine content
Translates objectives/treatment to determine media
Synthesizes objectives/sequence/content/media to develop presentation outline
Synthesizes objectives/sequence/content/media to determine needed visuals
Synthesizes objectives/sequence/content/media to determine needed audio
Synthesizes objectives/sequence/content/media to determine odors, tastes, tactile sensations
Compiles needed sensory inputs to develop storyboard
Translates storyboard to develop presentation specifications
Explains specifications to production group to have presentation produced

To improve instruction through systems approach

Listens and watches professor to analyze teaching technique
Observes student behavior to analyze teaching technique
Analyzes lecture to derive objectives for course
Confers with professor to confirm validity of objectives
Analyzes derived objectives to define conditions for learning
Confers with students to ascertain visuals needed
Locates artifacts in museum to illustrate course content
Locates visuals in books to illustrate course content

Evaluates commercial materials to illustrate course content
Arranges visual materials in sequence to illustrate course content

To design equipment systems

Analyzes goals of organization to determine communication needs
Translates communication needs to identify technical systems
Writes general specifications to describe technical systems
Analyzes other equipment systems to determine external constraints
Analyzes physical facilities to determine physical constraints
Analyzes monetary considerations to determine financial constraints
Analyzes constraints to identify alternate systems
Analyzes constraints to identify alternate formats
Projects system growth to develop projected budget
Confers with engineer to determine interface of systems
Analyzes physical constraints to draw physical schematic

To design improved training equipment

Writes criteria for needed device to ensure compatibility with system
Translates criteria for device to develop technical specifications
Compares devices with technical specifications to choose most appropriate
Designs prototype device to meet technical specifications
Assembles prototype to test design feasibility
Performs cost analysis to determine product cost data
Writes technical specifications for contract to initiate production of devices

To design new facilities

Analyzes work to be done to specify design needs
Analyzes budget to determine cost constraints
Analyzes physical construction to determine physical constraints
Analyzes equipment specifications to determine special requirements
Confers with architect to clarify design needs
(NOTE: See also ORGANIZATIONAL MANAGEMENT)

To plan instructional space

Analyzes instructional patterns to determine space needs
Confers with teachers to identify best floor plan

PRODUCTION FUNCTION

To shoot photographs on location

Selects appropriate equipment to perform photographic assignment
Selects appropriate film to perform photographic assignment
Confers with client to determine client needs
Takes photographs to fit client needs

To produce visuals for presentation

Reads script to develop overall view
Discusses with author to clarify details of presentation
Analyzes script to identify major ideas
Prepares sketches to convey message of script
Discusses with author to get approval of storyboard
Prepares photographs to convey message of script

To prepare materials for TV

Edits film footage to produce final film

To produce/direct motion picture

Analyzes script to write shot breakdown
Analyzes production details to write production plan
Analyzes shot sequences to determine needed locations/sets
Surveys location to revise shot breakdown
Instructs sound crew to direct audio recording
Instructs camera crew to direct shots to be taken
Instructs talent to direct action for shots
Observes run-through to suggest improvements in film
Evaluates take to accept or reject film
Confers with film editor to explain film concepts
Advises film editor to suggest improvements
Views sequences of film to approve rough cut
Confers with specialists to have rough cut approved
Surveys market potential to decide on number of copies

To coordinate production of slide presentation

Reads material provided to separate into major ideas
Rough sketches visuals to illustrate content outline
Writes summary of major ideas to organize content
Selects appropriate media to match media to content
Chooses style to give continuity to presentation
Explains storyboard cards to clarify production details
Confers with client to determine revisions needed
Revises presentation to meet standards

To coordinate production of filmstrip

Confers with supervisors to determine curriculum needs
Writes learning objectives to coordinate filmstrip design

Analyzes learning objectives to write rough script
Confers with photographers to determine pictures needed
Analyzes slides to select suitable ones
Evaluates slides & tapes to improve quality of material
Analyzes filmstrip to write teacher's manual
Analyzes catalogs and files to determine related materials

To coordinate production of sound filmstrip

Reads assigned script to assess work to be done
Edits portions of script to reduce length and improve quality
Selects slides using slide viewer to match concepts in script
Rewrites portions of script to match words to existing visuals
Confers with director to determine revisions needed
Revises scratch tape to improve quality

To coordinate production of filmstrip/record kit

Confers with directors to discuss proposal
Evaluates script to make purchase recommendation
Edits script to improve quality
Chooses subject matter consultant to ensure valid content
Confers with subject matter consultant to validate content
Evaluates script to choose appropriate music and effects
Evaluates narrator's reading to suggest improvements
Mixes narration tape & sound to produce finished tape
Designs layout to produce record jacket

To coordinate production of materials for course

Confers with client to determine presentation details
Reviews extant materials to select appropriate ones
Arranges materials to organize into logical order
Writes rough outline of content to develop course content
Sketches rough visuals to illustrate course outline
Selects appropriate media to match media to content
Develops PERT chart to assign completion dates
Incorporates design elements to write text
Evaluates materials produced to remove poor quality materials
Designs evaluation forms to pilot test instructional materials
Evaluates pilot test to determine poor sequences
Revises instructional materials to improve quality

To improve production standards

Analyzes information on visual materials to develop guidelines
Analyzes training materials to list weak areas in visuals
Writes visual standards to make guidelines
Designs course to instruct in visual communications
Synthesizes TV lighting requirements to write TV production manual
Describes TV camera techniques to write TV production manual
Describes set-up for role plays to write TV production manual
Describes placing of mikes to write TV production manual
Advises on filmmaking techniques to inform field personnel
Develops standards for audio to write audio production manual

To write computer programs for computer-assisted instruction (CAI)

Confers with teacher to understand concept
Queries teachers to develop sequence for program
Suggests alternative approaches to define concept for program
Examines program outline to decide programming language
Designs flow chart to develop sequence for program
Analyzes steps in flow chart to translate into computer language
Tests program in computer to discover errors
Rewrites program to eliminate errors

To build closed-circuit television (CCTV) studio

Analyzes program needs to write design specifications
Incorporates design specifications to draw floor plan
Incorporates design specifications to write equipment specifications
Examines equipment in operation to assess performance
Examines builders at work to ensure specifications are met
Hooks up equipment to equip CCTV studio

EVALUATION-SELECTION FUNCTION

To develop a climate that is supportive of evaluation

Reads key educational journals to assess attitudes to evaluation
Confers with educational leaders to assess attitudes to evaluation
Confers with client group to identify special problems
Speaks to client group to develop rapport with group
Instructs client group to explain purposes of evaluation
Instructs client group to explain role of evaluator
Confers with client group to answer questions regarding evaluation
Discusses with client group to emphasize non-threatening evaluation
Speaks with individual members to reduce specific inhibitions
Speaks with client group to invite participation in evaluation

To plan and focus project evaluation

Reads project proposal to determine objectives to be evaluated
Analyzes project personnel/organization to determine decision makers

Speaks with decision makers to define decisions to be made
Translates project proposal/reports to specify project assumptions
Translates project proposal/reports to specify criteria for decision
Observes project in operation to learn project procedures
Speaks with project staff to learn project procedures
Translates objectives to specify student behaviors
Reads proposal to determine dates for evaluation reports
Reads proposal to determine audience for reports
Reads research literature to identify similar evaluation projects
Synthesizes needs/evaluation knowledge to develop evaluation plans
Speaks to content/technical experts to obtain review of evaluation plans
Translates evaluation plans to identify specific evaluation activities
Analyzes evaluation activities to determine staff/time/resources

To develop evaluation models and techniques

Confers with client or associates to identify evaluation problem
Analyzes audience for information to determine characteristics
Analyzes evaluation problem to determine decisions to be made
Analyzes decisions to be made to determine information needs
Analyzes manageability of project to determine constraints
Analyzes study costs to determine money constraints
Translates information needs to identify values to be measured
Formulates value parameters to select behaviors reflecting values
Sets priorities among values to assign importance to behaviors
Selects appropriate indicators to measure values and behaviors
Translates indicators to develop criteria for evaluation instrument
Compares instruments/criteria to select evaluation instrument
Translates criteria to develop needed evaluation instrument
Designs data collection strategy to obtain measures of indicators
Sets up data processing procedure to analyze data
Sets up data translation procedure to obtain answers from data
Translates model decisions to put in mathematical format
Translates model decisions to put in graphical form
Compares model and objectives to test model effectiveness
Compares model and client needs to test if model communicates
Runs sample data through model to field test for accuracy
Applies model to other projects to test whether results can be generalized

To collect, process, analyze & interpret evaluation data

Reads evaluation model/instrument to become aware of information needs
Reads evaluation model/instrument to identify sources for evaluation data
Writes methodology to collect evaluation data
Formulates sampling procedure to collect evaluation data
Selects time schedule to collect evaluation data
Trains personnel to collect evaluation data
Writes format to code evaluation data
Reads computer program library to select computer program
Supervises data processing to translate data to usable format
Reads evaluation model to select statistical procedure
Supervises data processing to analyze evaluation data
Translates results of analysis to interpret meaning of data
Compares data & objectives to provide answers to study questions
Translates answers to questions to indicate alternative action steps
Writes report to decision makers to provide results & interpretations

To preview & select instructional materials

Views material to do initial screening
Analyzes present curriculum needs to reject irrelevant materials
Analyzes future curriculum needs to reject irrelevant materials
Compares with teacher's needs to reject irrelevant materials
Analyzes possible uses of materials to select most appropriate
Examines evaluation methods to select best method
Prepares annotations to describe materials
Explains materials to evaluators to lead evaluation session
Leads discussion to gather reactions
Summarizes points made to lead evaluation session
Synthesizes comments to summarize evaluation
Evaluates comments/recommendations to make purchase decision
Analyzes reactions/needs to develop purchase priorities
Discusses material utilization to gather reactions
Provokes teacher comments to gather reactions
Determines teacher materials needs to evaluate materials
Synthesizes teacher reactions to make purchase decision
Asks students questions to field test materials
Analyzes success in meeting objectives to field test materials
Asks students to evaluate materials to field test materials
Synthesizes student reactions to make purchase decisions
Examines success in meeting objectives to make purchase decisions

To evaluate instructional materials

Writes guidelines to select evaluation committee
Translates guidelines to select committee members
Reads literature to select items for evaluation
Screens inputs to select items for evaluation
Determines committee evaluations to compile evaluation report
Attends staff evaluation session to lead discussion
Confers with staff to determine materials needs

To pilot test prototype instructional materials

Reads materials objectives to identify learner behaviors
Translates learner behaviors to develop prototype test
Compares test with objectives to ensure test validity
Discusses test with author to ensure test validity
Questions student regarding materials to provide comparison data
Compares test/verbal responses to check test validity
Observes students using materials to identify problems with materials
Observes reactions of students to assess nonverbal response
Listens to student questions to identify problems with materials
Observes students taking tests to identify problems with test
Listens to student questions to identify problems with test
Compares analyzed data/objectives to identify objectives not met
Performs item analysis of test to identify weak areas
Writes anecdotal data to interpret results of tests

SUPPORT-SUPPLY FUNCTION

To improve equipment repair service

Analyzes repair history to identify equipment operation problems
Lists equipment operation problems to list crucial operating factors
Analyzes crucial operating factors to design readiness check-list

To provide film inspection and repair service

Carries films to work area to prepare for inspection
Operates Harwald film inspector to inspect and repair film
Writes number of film on log to keep record of distribution
Places inspected films on shelves to store for future use
Cleans off points and rollers to maintain film inspector

To improve equipment acquisition procedures

Writes technical specifications for equipment to evaluate proposals of contractor
Designs basic parameters of device to specify for production
Writes guidelines to specify minimum specifications for equipment
Performs cost analysis of repairs to recommend equipment
Confers with management to encourage purchase of equipment
Lists recommended equipment per unit to inform field personnel

To improve cataloging procedures

Gathers data to identify new cataloging techniques
Evaluates use of microfiche to design automated system
Evaluates use of microfilm to design automated system
Analyzes engineering demands to design automated system
Analyzes equipment standards handbook to recommend standard definitions
Lists recommended definitions to standardize definitions
Confers with management to recommend standard definitions

To catalog materials

Reads course materials to ensure correct catalog notations
Reads new materials to classify materials
Previews film to write catalog description
Writes short description of film to catalog film
Reads review of materials to cross-index materials
Cross-indexes materials to facilitate location
Reads curriculum guides to classify materials in curriculum areas
Analyzes curriculum areas to identify curriculum topics
Groups curriculum topics to assign to grade levels
Adapts commercial catalog cards to catalog to local needs

To improve distribution system

Analyzes flow to identify major steps
Confers with workers to identify major problems
Examines forms used to identify needed improvements
Designs new forms to improve record keeping
Plans new scheduling system to improve scheduling
Examines current routing lists to identify major problems
Plans new routing list to improve circulation
Analyzes circulation records to compute usage figures
Analyzes usage figures to project equipment needs

To locate curriculum materials

Reads flyers and magazines to identify curriculum materials
Confers with teacher to determine needs & objectives
Analyzes materials file to select references
Confers with teacher to evaluate materials available
Confers with teacher to explain reference sources
Advises teachers to inform of materials available

UTILIZATION FUNCTION

To help student identify learning interests & select objectives

Reads student records to identify relative educational achievement
Probes student to identify interest and talent
Reads student records to identify social/ethnic differences
Reads student records to identify interest/attitude
Converses with student to identify interest/talent
Makes suggestions to student to identify interest/talent
Reads student records to identify past learning in area
Reads student records to identify learning difficulties
Analyzes with student to translate interest to broad objectives
Analyzes with student to determine objectives
Evaluates objectives with student to select objectives of immediate interest

To help student select learning activities to meet objectives

Reads diagnostic test results to analyze student learning style
Discusses with student to determine learning style preference
Reads listing of learning activities to identify instructional materials
Compares activities/learning style to select instructional activities
Confers with student to determine evaluation used

To lecture/make media presentations to large student groups

Speaks to students to identify objectives of presentation
Speaks to students to explain importance of objectives
Speaks to students to present lecture information
Discusses with students to ask students questions
Analyzes questions/answers to evaluate student understanding
Analyzes questions/answers to evaluate presentation effectiveness
Observe degree of student involvement to evaluate presentation effectiveness
Translates evaluation to change presentation
Speaks to students to respond to student questions

To monitor individualized instruction/self-instructional media

Observes students using materials to identify problems in handling materials
Discusses with student to explain materials
Discusses with student to solve problem in materials
Discusses with student to recommend tutor to solve problem

To tutor individual students with learning difficulties

Questions students to identify what student does understand
Reads student records to identify learning problems
Speaks to student to prescribe remedial learning activities
Asks students questions to probe understandings/problems
Analyzes student feedback to revise tutoring approach

To follow up student work on learning activity

Discusses with student to obtain impression of learning experience
Compares pre- & post-tests to determine if student met objectives
Speaks to student to identify objectives not met
Discusses with student/parent to explain student progress
Evaluates student/parent conference to write report
Writes report of student/parent conference to keep record of progress

*UTILIZATION-DISSEMINATION FUNCTION*

To maintain professional status/keep up in field

Reads books/journal articles to learn issues/new knowledge
Joins professional associations to learn issues/new knowledge
Joins professional associations to develop professional contacts
Attends conventions to learn issues/new knowledge
Attends conventions to develop professional contacts
Writes articles/convention papers to disseminate new ideas
Writes articles/convention papers to gain recognition in field
Confers with colleagues to understand issues in field
Confers with colleagues to identify better jobs in field

To explain individualized instruction project to visitors

Talks with visitor to get acquainted/discover needs
Discusses with visitor to explain project
Instructs visitor to summarize project characteristics
Observes class with visitor to see project in action
Listens to visitor/student/teacher discussion to provide help if needed
Discusses with visitor to summarize project

To provide information on audiovisual center

Analyzes clients of center to define potential audience
Designs briefings to describe center operation
Writes briefing guide to provide briefing guidelines
Conducts briefings to describe center operation
Talks with visitors to describe services available
Talks with visitors to describe cataloging system
Talks with visitors to assist in locating materials

To consult on media use and design

Advises outside personnel to improve use of TV techniques
Advises outside personnel to improve training center design
Prepares multi-media presentation to demonstrate use of media
Discusses with audience to clarify media principles used
Examines prototype materials to suggest improvements/evaluate
Serves on committees to disseminate information on media

To promote increased use of instructional television (ITV)

Discusses with content specialists to identify appropriate parts of course
Designs model to clarify method/media decisions
Analyzes research on ITV to identify relevant factors
Analyzes cost effectiveness to demonstrate advantages of ITV
Observes hardware systems to evaluate effectiveness
Writes report to management to propose installation of ITV

To inform teachers about media

Confers with teachers to inform on materials & equipment
Assesses teaching needs to suggest appropriate materials
Plans workshops to demonstrate audiovisual services
Gives lectures to inform of library procedures
Gives lectures to inform of CAI programming
Gives lectures to inform of language lab operation

To advise product planners on education market

Evaluates new product specifications to align with educational expectations
Evaluates changes in products to determine effect for educational applications
Discusses with product planners to inform of educational needs

To facilitate fullest use of company products

Resolves usage problems to assist educators
Conducts workshops on products to assist educators
Identifies need to produce pamphlet on product
Writes pamphlet to describe application of product
Trains salesmen to explain/sell audiovisual products

To assist content specialist in developing materials for media training

Discusses with content specialists to define training problem
Poses alternative responses to define training problem
Evaluates course outline to identify coherent segments
Discusses with content specialist to develop associated task list
Drafts lesson plan to meet training problem
Confers with content specialists to assist in TV program design
Writes instructions to explain use of algorithms
Evaluates draft programs to assess methodology used

To teach basic audiovisual course

Describes media requirements to teach use of media in instruction
Describes group size contingencies to teach use of media in instruction
Advises students to assist in teaching with media
Advises students to assist in multi-media presentations
Teaches over CCTV to instruct in media production
Teaches over CCTV to instruct in graphics technique
Advises students to inform on graphics technique
Advises students to assist in making movie
Analyzes media skills test results to evaluate student performance
Advises students to inform on courses to take
Designs multi-media presentation to demonstrate use of media
Confers with students to clarify media principles

To teach photography course

Writes lesson plans to organize course content
Writes objectives to produce mediated presentation
Discusses with students to clarify elements of composition
Discusses with students to clarify lens setting decisions
Supervises use of cameras to provide experience in photography
Discusses pictures to clarify composition/setting

To teach interaction analysis

Codes classroom dialogs to provide models for instruction
Describes process of coding to teach how to code
Discusses with students to clarify coding disagreements
Role plays teacher in class to demonstrate teacher behavior

To teach microteaching

Discusses with students to clarify issues
Discusses microteaching principles to prepare teacher for taping
Observes teaching episode to identify teacher behavior
Codes teaching behavior to provide model of behavior
Critiques videotape with teacher to point out teaching behavior
Discusses with teacher to suggest behavior improvements
Directs production of videotape to provide model for critique
Describes microteaching to inform student teachers